

MassDEP RTN 3-23246

Phase V Status Report No. 27 and Remedial Monitoring Report No. 42

50 Tufts Street, Somerville, Massachusetts

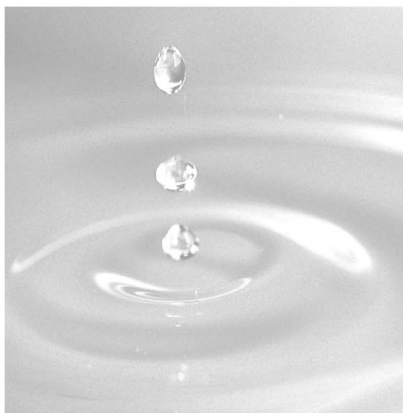
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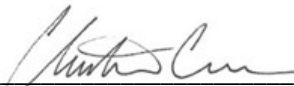
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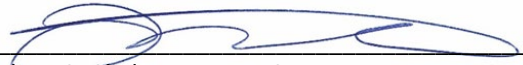
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Table of Contents

Acronyms and Abbreviations	vi
Executive Summary	vii
E.S.1. Background	vii
E.S.2. Capuano Center	viii
E.S.3. Residential and Commercial Properties	ix
E.S.4. 60 Tufts Street	xi
E.S.5. 50 Tufts Street Property	xii
E.S.6. Future Activities	xii
E.S.7. Tufts Street Reconstruction Project	xii
E.S.8. GLX Project	xiii
E.S.9. Monitored Natural Attenuation	xiv
E.S.10. Remedial Monitoring Report No. 42	xiv
1. Introduction	1
1.1. Contact Information	1
1.2. Background	1
1.3. Purpose and Scope	3
1.4. Public Involvement (310 CMR 40.1400)	4
2. GLX Project	5
2.1. Background	5
2.2. RTN 3-35528	5
2.3. RTN 3-34742	5
2.3.1. Release Abatement Measure	5
2.4. Vehicle Maintenance Facility (VMF) Contained-in Determinations	6
2.5. Right-of-Way Contained-in Determinations	7
2.6. RTN 3-30620	7
2.7. Soil Characterization Data from MBTA ROW and Washington Street	7
2.8. Underdrain System in Washington Street	7
2.8.1. Background and Design Concept of Underdrain System	7
2.8.2. Effect of Perforated Distribution Pipe	8
3. Current Conceptual Site Model and Disposal Site Boundary	9
4. Data Collection	10
4.1. Groundwater Sampling	10
4.2. Comparison of PCE Concentrations to GW-2 Standards	10
4.2.1. Groundwater Plume Stability	11
4.3. Soil Vapor Sampling	11

4.3.1.	Soil Vapor Sampling – Checklists and Methods	12
4.3.2.	Soil Vapor Sampling – Results	12
4.4.	Indoor Air Sampling	13
4.4.1.	Indoor Air Sampling – Checklists and Methods	13
4.4.2.	Indoor Air Sampling – Results	13
4.5.	Meteorological Conditions	14
4.6.	Boring and Monitoring Well Installation	14
4.7.	Hydraulic Flow Data Loggers	15
5.	Capuano Center	16
5.1.	Background	16
5.2.	Remedial Objectives	16
5.3.	Inspection and Monitoring	16
5.4.	System Modifications	17
5.5.	Performance Efficiency and Effectiveness	17
5.6.	Management of Waste Materials	17
5.7.	Future Phase V Activities	17
5.7.1.	Longest Allowable Duration of AEPMM Shutdown	17
5.7.2.	Regulatory Closure	17
6.	Residential and Commercial Properties	19
6.1.	103 and 105 Washington Street	19
6.1.1.	103 Washington Street	19
6.1.2.	105 Washington Street	20
6.2.	EPMM Status	20
6.2.1.	Remedial Objectives	21
6.3.	Option 1 EPMMs (SSDS)	22
6.3.1.	Operation and Monitoring	22
6.3.1.1.	35-37 Knowlton Street Renovation	23
6.3.2.	EPMM Shutdown	23
6.3.2.1.	AEPMM Closure Testing at 9 Knowlton Street	23
6.3.2.2.	AEPMM Closure Testing at 13 Knowlton Street	23
6.3.3.	Longest Allowable Duration of AEPMM Shutdown	24
6.3.4.	Efficiency and Effectiveness	24
6.3.5.	System Maintenance and Modifications	24
6.3.6.	Management of Waste Materials	25
6.4.	Option 2 and 3 EPMMs (Vapor Trench and/or New Slab)	25
6.4.1.	Operation and Monitoring	25
6.4.2.	Efficiency and Effectiveness	26
6.4.3.	System Maintenance and Modifications	26
6.4.4.	Management of Waste Materials	26
6.5.	Option 4 EPMMs (Passive Vapor Mitigation in New Construction)	26

6.5.1.	Operation and Monitoring	27
6.5.1.1.	10 Morton Street Renovation	27
6.5.1.2.	31 Tufts Street	28
6.5.2.	Efficiency and Effectiveness	28
6.5.3.	System Maintenance and Modifications	29
6.5.3.1.	121 Washington Street	29
6.5.4.	Management of Waste Materials	29
6.6.	Activity and Use Limitations	29
6.7.	Permanent Solution Statements	29
6.7.1.	Permanent Solution without Conditions	30
6.7.2.	Permanent Solution with Conditions	30
6.8.	Future Phase V Activities	31
6.8.1.	EPMM Operation and Monitoring	31
6.8.2.	EPMM Modifications	31
6.8.3.	EPMM Closure Sampling	31
6.8.4.	Installation of New EPMMs	32
6.8.5.	AULs and Permanent Solutions	32
6.8.6.	Future Residential Monitoring	32
7.	60 Tufts Street	33
7.1.	Background	33
7.2.	Remedial Objectives	33
7.3.	Inspection and Monitoring	33
7.4.	Performance Efficiency and Effectiveness	34
7.4.1.	AEPMM Closure Testing	34
7.5.	Management of Waste Materials	34
7.6.	System Modifications	34
7.7.	Future Phase V Activities	34
7.7.1.	EPMM Closure Sampling	34
7.7.2.	Longest Allowable Duration of AEPMM Shutdown	35
7.7.3.	Regulatory Closure	35
8.	50 Tufts Street Property	36
8.1.	Background	36
8.2.	Remedial Objectives	36
8.3.	Inspection and Monitoring	36
8.4.	Performance Efficiency and Effectiveness	37
8.5.	Management of Waste Materials	37
8.6.	System Modifications	38
8.7.	Future Phase V Activities	38
8.7.1.	Longest Duration of AEPMM Shutdown	38

9.	Monitored Natural Attenuation	39
9.1.	MNA Program Objectives	39
9.2.	MNA Activities	39
10.	Tufts Street Reconstruction	41
10.1.	City of Somerville Subsurface Investigation	41
10.2.	50 Tufts Street Soil Borings and Soil Samplings	41
11.	Remedial Monitoring Report No. 42	42
12.	References	43

Tables

2-1	GLX Excavated Material Summary
2-2	GLX Summary of Contained-In Determinations
2-3	GLX Right of Way Soil Characterization Summary
4-1	Summary of Groundwater Sampling Activities
4-2	Chemical Testing Results – GEI Groundwater Sampling
4-3	Chemical Testing Results – GLX Groundwater Sampling
4-4	Chemical Testing Results – 31 Tufts Soil Vapor Sampling
4-5	Chemical Testing Results – 10 Morton Soil Vapor Sampling
4-6	Chemical Testing Results – 103 Washington Soil Vapor Sampling
4-7	Chemical Testing Results – 105 Washington Soil Vapor Sampling
4-8	Chemical Testing Results – 31 Tufts Indoor Air Sampling
4-9	Chemical Testing Results – 103 Washington IA Sampling
4-10	Chemical Testing Results – 105 Washington IA Sampling
4-11	Summary of Meteorological Data During Air Sampling Events
5-1	Summary of SSDS Monitoring Events – Capuano Center
5-2	Chemical Testing Results – Capuano Center Indoor and Outdoor Air
6-1	Exposure Pathway Mitigation Measure (EPMM) Status
6-2	Indoor Air Sampling and EPMM Monitoring
7-1	Summary of SSDS Monitoring Events – 60 Tufts Street
8-1	Summary of SSDS Monitoring Events – 50 Tufts Street
9-1	Groundwater Elevations

Figures

1-1	Site Location Map
1-2	Disposal Site Map and Site Boundary
2-1	2024 Shallow Plume Conditions
2-2	Kleinfelder Soil Data and GLX Project Soil Pre-Characterization Samples
2-3	Underdrain System Plan
2-4	Washington Street Underdrain Elevation Schematic
2-5	MBTA Design Package: DP21 Drainage Plan

- 4-1 Monitoring Well Locations
- 4-2 Sub-Slab Soil Vapor and Indoor Air Sampling
- 6-1 EPMM Installation Progress
- 6-2 EPMM Mitigation Flow Chart
- 6-3 Permanent Solution Status
- 8-1 Combined Influent VOC Concentrations and Cumulative VOC Removal
- 10-1 50 Tufts Street Shallow Soil Boring Plan

Appendices

- Appendix A MassDEP Transmittal Forms (BWSC-108, BWSC-108As, and BWSC-108Bs)
- Appendix B Property Owner Notification Letters
- Appendix C Kleinfelder Soil, GLX Soil Precharacterization Data, and Contained-In Determinations
- Appendix D Technical Memo – Washington Street Underdrain System
- Appendix E Laboratory Testing Reports
- Appendix F Pre-Sampling Checklists and Air Sampling Checklist
- Appendix G Boring and Monitoring Well Installation Logs
- Appendix H Transducer Data Graphs
- Appendix I Field Monitoring Forms and Inspection Logs
- Appendix J EPMM Inspection Forms

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Acronyms and Abbreviations

µg/L	micrograms per liter
µg/m ³	Micrograms per cubic meter
AUL	Activity and Use Limitation
CEP	Critical Exposure Pathway
COPC	Compounds of Potential Concern
CRA	Comprehensive Remedial Action
CSA	Comprehensive Site Assessment
DNAPL	Dense non-aqueous phase liquid
EPA	U.S. Environmental Protection Agency
EPMM	Exposure Pathway Mitigation Measure
FIR	Final Inspection Report
GEI	GEI Consultants, Inc.
GLX	Green Line Extension
IH	Imminent Hazard
IRA	Immediate Response Action
lbs	Pounds
LQG	Large Quantity Generator
LSP	Licensed Site Professional
MassDEP	Massachusetts Department of Environmental Protection
MBTA	Massachusetts Bay Transportation Authority
MCP	Massachusetts Contingency Plan
MNA	Monitored Natural Attenuation
NAPL	Non-aqueous phase liquid
NSR	No Significant Risk
OHM	oil and/or Hazardous Material
OMM	Operation, Maintenance, and Monitoring
PCE	Tetrachloroethylene (perchloroethylene)
PSS	Permanent Solution Statement
RAM	Release Abatement Measure
RAO	Response Action Outcome
RAP	Remedial Action Plan
RIP	Remedy Implementation Plan
RMR	Remedial Monitoring Report
ROS	Remedy Operations Status
RTN	Release Tracking Number
SHE	Substantial Hazard Evaluation
SSDS	Sub-slab Depressurization System
SVE	Soil Vapor Extraction
TCA	1,1,1-trichloroethane
TCE	Trichloroethylene
VOC	Volatile Organic Compound

Executive Summary

On behalf of UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. (GEI) prepared this Phase V Status Report No. 27 and Remedial Monitoring Report (RMR) No. 42 for the site located at 50 Tufts Street in Somerville, Massachusetts (the Site). The Site is identified by Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) 3-23246. The Site includes the 50 Tufts Street property (the Property), other properties in the neighborhoods east and immediately north, south, and west of the Property, and the Michael E. Capuano Early Childhood Center (Capuano Center) located at 150 Glen Street in Somerville, Massachusetts. The Site has been in Remedy Operation Status (ROS) since 2011. This Phase V Status Report No. 27 covers the period from June 16 to December 15, 2024.

E.S.1. Background

From approximately 1955 to 2002, the Property was used for storage and distribution of industrial chemicals, laundry supplies, and dry-cleaning supplies. Chemicals stored at, and transported to and from the Property, included chlorinated volatile organic compounds (VOCs). These chlorinated VOCs – particularly tetrachloroethylene (also called perchloroethylene [PCE]), trichloroethylene (TCE), and 1,1,1-trichloroethane (TCA) – have been detected in soil, soil vapor, indoor air, and groundwater at the Property and are therefore the compounds of potential concern (COPCs) for the Site. In some buildings within the Site, chlorinated VOCs have been detected in indoor air samples.

The detection of chlorinated VOCs in indoor air at some buildings required the implementation of an Immediate Response Action (IRA). The “Immediate Response Action Plan” associated with RTN 3-23246 was submitted to MassDEP on January 9, 2006. The Site was classified as Tier IC (Permit No. W085813). The “Phase II Comprehensive Site Assessment (CSA), Method 3 Risk Characterization, and Phase III Remedial Action Plan (RAP)” (Phase II/III) for the Site was submitted to MassDEP on July 14, 2008. The “Phase IV Remedy Implementation Plan” (Phase IV RIP) was submitted to MassDEP on August 10, 2009. The “Immediate Response Action Completion Report and Remedial Monitoring Report No. 11” (IRAC Report) was submitted to MassDEP on November 13, 2009, and the “Immediate Response Action Completion Report Amendment” (IRAC Report Amendment) was submitted to MassDEP on April 1, 2011. The “Phase IV Final Inspection Report, Remedial Monitoring Report No. 15, and Phase V Remedy Operation Status Report” (Phase IV FIR/Phase V ROS) was submitted to MassDEP on August 4, 2011. The Site was reclassified as Tier II on August 1, 2014.

The remedial action alternative (RAA) selected by the Phase III evaluation included:

1. Installing Exposure Pathway Mitigation Measures (EPMs) to the extent feasible (e.g. vapor barriers and venting systems, or sub-slab depressurization systems [SSDs]), and recording Activity and Use Limitations (AULs) as appropriate, for residences where the soil vapor migration pathway to indoor air has been confirmed, and installing EPMs in occupied commercial buildings to reduce chlorinated VOC concentrations in indoor air to that which constitutes a condition of No Significant Risk (NSR).

2. Continuing to operate the soil vapor extraction (SVE) system at the Property to remove COPCs from the vadose zone.
3. Conducting a Site-wide Monitored Natural Attenuation (MNA) program to evaluate overburden and bedrock groundwater plume concentrations over time to assess the rate of natural attenuation processes, and to confirm that groundwater concentrations of chlorinated VOCs are generally stable or decreasing.

The Phase IV FIR/Phase V ROS documented that construction and implementation of the Comprehensive Response Action (CRA) has been completed; and additional activities, such as operation and monitoring of active remedial systems, will be conducted under Phase V ROS.

In accordance with the MCP, particularly 310 CMR 40.0892, this Phase V Status Report No. 27 and RMR No. 42 includes the following information regarding the remedial actions being conducted at the Site:

- A description of the type and frequency of operation, maintenance, and/or monitoring (OMM) activities.
- A description of any significant modifications made to the OMM activities since the last reporting period.
- An evaluation of the performance of the remedial action during the reporting period, including whether the remedial action is achieving remedial goals specified in the Phase IV RIP as described in 310 CMR 40.0874(3), and a description of any conditions or problems identified through OMM activities during the reporting period that are, or may be, affecting the performance of the remedial action.
- A description of the measures taken to address any conditions or problems identified through OMM activities during the reporting period.
- The name, license number, signature, and seal of the LSP.

Following is a summary of OMM activities conducted at the Site to date:

E.S.2. Capuano Center

An SSDS is installed in the east wing of the Capuano Center. In addition, GEI sealed certain slab/wall joints at the Capuano Center to mitigate a potential preferred migration pathway. GEI conducted 24 rounds of indoor air sampling after the SSDS was installed in February 2007. The Critical Exposure Pathway (CEP) to indoor air has been eliminated and a condition of NSR has been achieved for occupants of the Capuano Center. Accordingly, it is GEI's opinion that the system was constructed and is operating in accordance with the design standards provided in the Phase IV RIP and has achieved the remedial objectives.

The system currently includes three radon fans on dedicated discharge pipes for each collection header extending above the roofline. Remote telemetry sensors are installed on the system. GEI performed post-modification indoor air sampling on May 23 and 24, 2015. VOCs were not detected above laboratory reporting limits during the indoor air sampling, indicating that the system as modified continues to meet the remedial objectives.

GEI will continue to inspect and maintain the system and continue operation and monitoring under ROS.

E.S.3. Residential and Commercial Properties

As part of the IRA, while Site conditions were still under investigation, GEI took timely action to evaluate and implement measures to eliminate or mitigate CEPs to the extent feasible. The feasibility of such measures was determined by physical conditions, including the suitability of each property to installation of active or passive vapor controls, and by amenability of property owners to provide access. Mitigative measures were initially implemented as IRA activities. The Phase II/Phase III assessment and evaluation of RAAs included response actions to address CEPs as part of the recommended CRA. With the submittal of the Phase IV RIP, the IRA addressing CEPs was closed with an IRAC Report and an IRAC Report Amendment. In accordance with the MCP (310 CMR 40.0427), “mitigation of Critical Exposure Pathway(s) is continuing by incorporation of ongoing response actions to address the Critical Exposure Pathway(s) into the Phase IV Remedy Implementation Plan for the disposal site.” Following the submittal of the IRAC Report and IRAC Report Amendment, therefore, all further response actions, including mitigation of any CEPs at the Site, have been conducted in accordance with the Phase IV RIP. Construction and implementation of the CRA has been completed. OMM activities, including operation of active remedial systems and active EPMMs (AEPMMs), continue to be conducted under Phase V ROS or are being implemented as Partial Permanent Solutions Statements (PSSs) with Conditions. As construction and redevelopment occurs within the Disposal Site, GEI continues to evaluate the need for new or modified EPMMs, consistent with the CRA and Phase IV RIP, and implement those measures pursuant to Phase V ROS.

Following is a summary of activities conducted and results obtained with respect to EPMMs through December 15, 2024:

- EPMMs have been installed or are being installed in 24 residential and commercial properties, not including the EPMMs installed at 50 Tufts Street, 60 Tufts Street, and the Capuano Center. Currently EPMMs are relied upon to meet the remedial objectives at 20 properties and are not being relied on at the following:
 - One EPMM (at 103 Washington Street) was abandoned when the building was vacated and then demolished as part of redevelopment. The redevelopment of the mixed-use building at 103 Washington Street did not include an EPMM (see below for additional information).
 - An EPMM was installed at 163 Glen Street when the former American Legion Post building was redeveloped as multi-family housing. It was demonstrated that the EPMM was not required based on sub-slab soil gas sampling results that were below residential sub-slab soil gas Screening Values (SSGSV).
 - The EPMM at 10 Morton Street was temporarily removed during building renovation activities. Construction of a new EPMM was completed during this reporting period.
 - An EPMM is in the process of being installed at 121 Washington Street, a mixed-use building with retail space on the ground floor and residences above, but it is not yet complete.
- The property at 103 Washington Street has been redeveloped as a mixed-use building with commercial space and open-air parking on the first floor and residential units above without

an EPMM. As of February 2024, construction is complete, and the building is occupied. GEI conducted indoor air and sub-slab soil vapor sampling at 103 Washington Street in March 2022, February 2023, May 2023, and December 2024. The sampling results indicated that the vapor intrusion pathway is unlikely to be of concern under current and future conditions.

- The property at 105 Washington Street has been redeveloped as a mixed-use building with commercial space and open-air parking on the first floor and residential units above. Construction activities were completed in June 2022, and the building is occupied. An EPMM was not installed. GEI conducted indoor air and sub-slab soil vapor sampling at 105 Washington Street in March 2022, February 2023, May 2023, and December 2024. The sampling results indicated that the vapor intrusion pathway is unlikely to be of concern under current and future conditions.
- The property at 10 Morton Street is being renovated which includes lowering the elevation of the basement floor and installing a replacement EPMM. The replacement EPMM provides for a sub-slab venting system and 20 mil vapor barrier. Post installation sub-slab soil vapor and indoor air testing will be conducted to evaluate whether the EPMM and an AUL are required to maintain a condition of NSR. The EPMM installation was completed when the riser pipe to the roof was reconnected in September 2024. Confirmatory sub-slab soil vapor samples were collected on October 9, 2024, from the two new soil vapor pins installed in April 2024. Concentrations of PCE were detected above laboratory reporting limits at 12.6 $\mu\text{g}/\text{m}^3$ and 16.3 $\mu\text{g}/\text{m}^3$ in the two samples below the Residential Sub-slab Soil Gas Screening Value (98 $\mu\text{g}/\text{m}^3$) SV5 and SV6, respectively. Collection of confirmatory indoor air samples is planned for winter 2025.
- The property at 31 Tufts Street, formerly a paved parking lot, has been redeveloped with multi-family housing. The development is a three-story residential apartment building with surface parking and public open space. An EPMM was incorporated into the new construction pursuant to a RAM Plan submitted for this property in July 2022. GEI conducted indoor air and sub-slab soil vapor sampling at 31 Tufts Street in October 2023, January 2024, and September 2024. Indoor air samples were collected at three locations on the first floor in October 2023 and January 2024. One sample was in the utility room and two samples were from within residential units (the three-bedroom and two-bedroom apartments). In September 2024, two additional indoor air sample locations within residential units were included for a total of five locations sampled. Two soil gas samples were collected from beneath the building and the concentration of PCE and TCE in all the samples collected were less than residential SSGSV. The indoor air concentrations of PCE (0.203 $\mu\text{g}/\text{m}^3$, 0.176 $\mu\text{g}/\text{m}^3$, 0.604 $\mu\text{g}/\text{m}^3$, 0.210 $\mu\text{g}/\text{m}^3$, and 0.142 $\mu\text{g}/\text{m}^3$,) were substantially lower than the residential Threshold Values (TV) (1.4 $\mu\text{g}/\text{m}^3$) in the October and September sampling and were not detected in the January round. GEI will continue coordinating with the owner of the property to continue performing the vapor intrusion evaluation at the property. Additional soil gas and indoor air sampling is planned for winter 2025.
- The property at 121 Washington Street is being redeveloped into a mixed-use building with commercial space on the ground floor and apartment units above, there is no parking associated with the development. A small commercial building formerly occupied the property and was demolished in 2020. As of December 2024, most of the building envelope is complete. An EPMM has been incorporated into the new construction, consistent with a RAM Plan submitted

in February 2024. Between February and April 2024, GEI observed components of the sub-slab vapor mitigation system installation and smoke testing. The remainder of the vapor mitigation system was installed in September 2024. The EPMM was complete by December 2024 when the system riser piping had extended through the roof of the building.

- GEI conducted 18 EPMM inspections during this reporting period in November 2024. GEI will conduct annual EPMM inspections again in the fall of 2025. GEI was unable to access three of the residential properties (4 Morton Street, 95R Franklin Street, and 27 Tufts Street) but will continue its attempts to obtain access for EPMM inspections at these properties during the next reporting period.
- ARCADIS U.S., Inc. (ARCADIS) prepared an Updated 2015 Method 3 Risk Characterization, which incorporated updated soil, groundwater, and indoor air data sets, and included updated MassDEP toxicity information, particularly for PCE and TCE. Based on the Updated 2015 Method 3 Risk Characterization, the performance of individual EPMMs, and a review of indoor air sampling results for samples collected since the Updated 2015 Method 3 Risk Characterization, a condition of NSR exists for current and future building occupants at each property within the Site.
- A Permanent Solution with Conditions Statement will be submitted for each property with an active or passive EPMM, where the EPMM has achieved the remedial objectives, an AUL has been recorded for the property, and sufficient post-EPMM indoor air sampling has been conducted. The filing of a Partial PSS with Conditions for an individual property documents the achievement of regulatory closure under the MCP for that property. Therefore, the Phase V provisions will not apply to properties for which a Partial PSS with Conditions has been submitted.

E.S.4. 60 Tufts Street

An SSDS has been installed in the 17-unit condominium building at 60 Tufts Street. The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS provides sufficient coverage to be protective. Indoor air testing results indicate that a condition of NSR has been achieved for building occupants at 60 Tufts Street. Accordingly, it is GEI's opinion that the system was constructed and is operating in accordance with the design standards provided in the Phase IV RIP and has achieved the remedial objectives.

Remote telemetry was installed on the system on July 24, 2015. GEI will continue to inspect and maintain the system. GEI monitors parameters and sub-slab conditions for the system (e.g., flow rate, vacuum) at the headers on a quarterly basis. GEI will continue operation and monitoring of the SSDS at 60 Tufts Street under ROS.

Based on pre-EPMM indoor air testing at 60 Tufts Street, and changes to the toxicological characteristics for PCE, the AEPMM may not be required to maintain a condition of NSR. GEI has communicated with the owners and occupants of 60 Tufts Street, who are amenable to EPMM closure indoor air testing. In accordance with MassDEP's 2016 VI Guidance, GEI has initiated a closure indoor air testing program at 60 Tufts Street. However, this testing was suspended during the COVID-19 pandemic. The unit GEI had been testing was sold, the condominium property management company changed, and GEI has not been able to contact the new owner.

E.S.5. 50 Tufts Street Property

An SSDS and an SVE system have been installed at the Property. The SSDS monitoring data continue to show that the sub-slab vacuum field generated by the SSDS provides sufficient coverage to be protective. The building is currently occupied by several commercial tenants. Based on indoor air testing results collected since the combined system has been in operation, a condition of NSR has been achieved for the building at the Property for full-time commercial workers. Accordingly, it is GEI's opinion that the system was constructed and is operating in accordance with the design standards provided in the Phase IV RIP and has achieved the remedial objectives. GEI will continue operation and monitoring of the combined SSDS/SVE system at 50 Tufts Street under ROS.

Remote telemetry was installed on the 50 Tufts Street system on April 14, 2015. The telemetry system at 50 Tufts Street consists of a wireless remote monitoring hub that receives telemetry notification from the other AEPMMs throughout the Site. GEI monitors parameters and sub-slab conditions for the system (e.g., flow rate, vacuum, off-gas treatment efficiency) quarterly, and monitors for off-gas treatment efficiency monthly.

The combined SSDS/SVE system installed at the Property serves to protect indoor air quality and to remove source material from the vadose zone below and around the building. Monitoring data from both the SSDS and SVE components through December 15, 2024 show that approximately 9,494 lbs of VOCs have been removed from the vadose zone at the Property. GEI will continue operation and monitoring of the combined SSDS/SVE system at 50 Tufts Street under ROS.

E.S.6. Future Activities

Current MCP requirements for AEPMMs implemented to meet the conditions for ROS (310 CMR 40.1026), include an operating regime for the active system and remote monitoring and automatic notification in the event of system failure. Operating regimes for active systems at the Site were included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011 and included an OMM plan for the active systems.

The MCP requires that remote telemetry provide the owner and operator of the building and MassDEP notification upon failure of the system. Remote telemetry has been installed at each property with an AEPMM including the Capuano Center, except for 9 Knowlton Street. The owner of 9 Knowlton Street has been unresponsive to telemetry access request letters, telephone calls, and property visits. Therefore, it is currently infeasible to install telemetry at this property.

GEI evaluated the current telemetry system in consideration of the 2024 MCP amendments, effective March 1, 2024. The MCP amendments include continual monitoring of system vacuum. However, GEI understands that properties where telemetry systems are already registered with MassDEP will be grandfathered in (310 CMR 40.1026[3][d][6]) and are not required to continually report system vacuum.

E.S.7. Tufts Street Reconstruction Project

The City of Somerville is in the planning stages to reconstruct the Tufts Street sidewalks and roadway. Several virtual and in-person community outreach meetings have been held during the previous

reporting periods between August and October 2023. The meetings were held virtually, and community events were in-person. A GEI representative attended both the virtual and in-person community meetings to evaluate the potential interplay between the disposal site and future reconstruction of the roadway and sidewalks.

On February 29, 2024, the City of Somerville announced that based on community feedback the scope of the project would expand to include the addition of planting trees and greenery. The City of Somerville stated that this may require deeper excavations and stated that due to the historical contamination originating at 50 Tufts Street additional shallow soil analysis was planned. The City of Somerville announced that the construction schedule has been updated to 2025 and 2026. GEI has met with and will continue to coordinate with the City of Somerville. GEI understands that the project will be conducted under a Utility Release Abatement Measure Plan which will include a Soil and Groundwater Management Plan.

On February 12, 2024, GEI observed the advancement of five soil borings on the 50 Tufts Street property adjacent to the property boundary with the City of Somerville sidewalk. The purpose of the soil sampling was to evaluate concentrations of chlorinated VOCs on the 50 Tufts Street property near the proposed work area for the Tufts Street Reconstruction project.

E.S.8. GLX Project

The MBTA, through its contractor GLX Constructors (GLXC), has completed work to extend MBTA Green Line service to Union Square in Somerville and beyond to College Avenue in Medford. This Green Line Extension (GLX) Project includes significant infrastructure improvements near the Site, including a new pump station, reconstruction of the bridge passing over Washington Street, new train tracks within the MBTA right-of-way (ROW), a new train station, and utility improvements.

The MBTA, GLX Constructors, and their contractors initiated three Release Tracking Numbers (RTNs) related to construction activities undertaken at the site:

- RTN 3-30620: A Special Project Designation (SPD) for the entire project.
- RTN 3-35528: A Utility-related Abatement Measure (URAM) for managing potentially contaminated soil and groundwater associated with installing a stormwater conveyance system within and adjacent to the MBTA ROW, and the demolition and replacement of the existing Washington Street Pump Station.
- RTN 3-34742: A Release Abatement Measure (RAM) for management of CVOC impacted soil encountered during GLX Project activities within Site boundaries.

By 2019, construction activities associated with the GLX Project within the Site boundaries were consolidated under RTN 3-34742. GEI has not been provided with timely information concerning project plans, field work, or MCP submittals by the MBTA and GLXC. GEI has reviewed and evaluated the soil characterization and groundwater data publicly available for RTNs 3-34742, 3-30620, and 3-35528, and analytical results for soil disposal pre-characterization samples collected within the MBTA ROW. The soil characterization data have no impact on the previous risk characterization conclusions or remedial alternatives selected for the Site. However, upon review of the data, GEI made a minor adjustment to

the Site boundary in Phase V Status Report No. 17, to include a portion of the MBTA ROW near Cross Street where very low PCE concentrations were detected in soil samples collected for construction purposes. A RAM Completion Report was submitted for RTN 3-34742 in May 2024.

Construction dewatering was performed in Washington Street between April 2019 and August 2020 as part of roadway reconstruction and utility installation. The construction dewatering expanded the Site plume to the south which did not return to pre-pumping conditions once dewatering was completed.

The utility installation included an underdrain system beneath Washington Street at the MBTA railway overpass. The stated purpose of the underdrain is for depressing the groundwater level below the roadway at the overpass to prevent the groundwater from exerting an upward water pressure on the pavement. The underdrain system was designed to perform a separate function from the new storm water collection and drainage system within the roadway. The underdrain system was intended to collect contaminated groundwater in a perforated pipe when the groundwater table was elevated and transfer the contaminated groundwater to a collection vault via a solid distribution pipe located beneath the groundwater table.

The MBTA contractor installed perforated, rather than solid distribution pipe, beneath the water table. The perforated distribution pipe continuously draws groundwater, permanently relocating contaminant plume 200-300 feet to the south. New receptors have not been affected since the shift is mostly contained to Washington Street.

E.S.9. Monitored Natural Attenuation

GEI evaluated the groundwater chemical testing results collected during MNA activities to update and supplement the plume stability monitoring and natural attenuation evaluation, as presented in the Phase II CSA / Phase III RAP report.

Based on an analysis of the Mann-Kendall statistical trend test results, which incorporates the additional groundwater testing data, the PCE, TCE, and TCA groundwater plumes continue to be stable. GEI has conducted the Mann-Kendall on 38 wells for 3 analytes, PCE, TCE, and TCA, which represents 114 data sets. The Mann-Kendall analysis shows that 94% of the data sets are either stable or decreasing of which more than 40% of these data sets are decreasing. This is a very strong demonstration of plume stability. It also demonstrates that if the dissolution of contaminants into groundwater from DNAPL is occurring, it is not preventing plume stability.

E.S.10. Remedial Monitoring Report No. 42

Remedial Monitoring Report No. 42, documenting OMM activities of active remedial systems at the Site, is presented in the BWSC-108A and 108B Transmittal Forms in Appendix A.

1. Introduction

On behalf of UniFirst Corporation (UniFirst) of Wilmington, Massachusetts, GEI Consultants, Inc. (GEI) prepared this Phase V Status Report No. 27 and Remedial Monitoring Report (RMR) No. 42 for the site located at 50 Tufts Street in Somerville, Massachusetts (the Site; Fig. 1-1). The Site is identified by Massachusetts Department of Environmental Protection (MassDEP) Release Tracking Number (RTN) 3-23246. The Site includes the 50 Tufts Street property (the Property), other properties in the neighborhoods east and immediately north, south, and west of the Property, and the Michael E. Capuano Early Childhood Center (Capuano Center) located at 150 Glen Street in Somerville, Massachusetts (Fig. 1-2). The Site has been in Remedy Operation Status (ROS) since 2011. This Phase V Status Report No. 27 covers the period from June 16 to December 15, 2024.

1.1. Contact Information

Entity Undertaking

Response Actions

UniFirst Corporation
68 Jonspin Road
Wilmington, MA 01887

Licensed Site Professional (LSP):

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President
GEI Consultants, Inc.
400 Unicorn Park Drive
Woburn, MA 01801
781.721.4012
LSP License No. 9719

Entity who will own, operate, and/or maintain the selected Remedial Action Alternative (RAA):

UniFirst Corporation
68 Jonspin Road
Wilmington, MA 01887
978-658-8888

Contact Person

Catherine Malagrida, P.G.
Environmental Compliance Manager
UniFirst Corporation
68 Jonspin Road
Wilmington, MA 01887
978.658.8888 ext. 0587

1.2. Background

In 2002, a release of chlorinated volatile organic compounds (VOCs) (particularly tetrachloroethylene [also known as perchloroethylene (PCE)], trichloroethylene [TCE], and 1,1,1-trichloroethane [TCA]) to soil and groundwater at the Property was reported to the MassDEP and assigned RTN 3-23246. Three other RTNs were subsequently issued for the Site: 3-24358, 3-24376, and 3-26114. For tracking and reporting purposes, these RTNs have been consolidated under RTN 3-23246.

The detection of chlorinated VOCs in indoor air at some buildings within the Site required the implementation of an Immediate Response Action (IRA). The “Immediate Response Action Plan” associated with RTN 3-23246 was submitted to MassDEP on January 9, 2006. The Site was classified as Tier IC (Permit No. W085813). The “Phase II Comprehensive Site Assessment (CSA), Method 3 Risk Characterization, and Phase III Remedial Action Plan (RAP)” (Phase II/III) for the Site was submitted to MassDEP on July 14, 2008. The “Phase IV Remedy Implementation Plan” (Phase IV RIP) was submitted

to MassDEP on August 10, 2009. The “Immediate Response Action Completion Report and Remedial Monitoring Report No. 11” (IRAC Report) was submitted to MassDEP on November 13, 2009, and the “Immediate Response Action Completion Report Amendment” (IRAC Report Amendment) was submitted to MassDEP on April 1, 2011. The “Phase IV Final Inspection Report, Remedial Monitoring Report No. 15, and Phase V Remedy Operation Status Report,” (Phase IV FIR/Phase V ROS) was submitted to MassDEP on August 4, 2011. The Site was reclassified as Tier II on August 1, 2014.

The Phase II/Phase III identified the following areas of the Site requiring investigation and mitigation:

- The Property.
- The Capuano Center.
- 60 Tufts Street, a 17-unit condominium building north of the Property, and
- Certain residences and commercial buildings located near the Property.

The RAA selected by the Phase III was:

1. Installing Exposure Pathway Mitigation Measures (EPMs) to the extent feasible (e.g. vapor barrier and venting system, or sub-slab depressurization systems [SSDs]), and recording Activity and Use Limitations (AULs) as appropriate, for residences where the soil vapor migration pathway to indoor air has been confirmed, and installing EPMs in occupied commercial buildings to reduce chlorinated VOC concentrations in indoor air to that which constitutes a condition of No Significant Risk (NSR).
2. Continuing to operate the soil vapor extraction (SVE) system at the Property to remove compounds of potential concern (COPCs) from the vadose zone.
3. Conducting a Site-wide Monitored Natural Attenuation (MNA) program to evaluate overburden and bedrock groundwater plume concentrations over time to assess the rate of natural attenuation processes, and to confirm that groundwater concentrations of chlorinated VOCs are generally stable or decreasing.

As part of the IRA, while Site conditions were still under investigation, GEI took timely action to evaluate and implement measures to eliminate or mitigate Critical Exposure Pathways (CEPs) to the extent feasible. The feasibility of such measures was determined by physical conditions, including the suitability of each property to installation of active or passive vapor controls, and by amenability of property owners to provide legal access. Mitigative measures were initially implemented as IRA activities. The Phase II/Phase III assessment and evaluation of RAAs included response actions to address CEPs as part of the recommended Comprehensive Response Action (CRA). With the submittal of the Phase IV RIP, the IRA addressing CEPs was closed with an IRAC Report and IRAC Report Amendment, in accordance with the MCP, particularly 310 CMR 40.0427 (“mitigation of Critical Exposure Pathway(s) is continuing by incorporation of ongoing response actions to address the Critical Exposure Pathway(s) into the Phase IV Remedy Implementation Plan for the disposal site”). Following submittal of the IRAC Report and IRAC Report Amendment, all further response actions were continued under Phase IV and Phase V.

The CRA for the Site includes continued active operation and maintenance of the existing commercial and residential EPMs, the SSDs at the Capuano Center, and the SSDs and SVE system at the Property,

to achieve a Permanent Solution pursuant to 310 CMR 40.0890. It is GEI's opinion that the Site meets the requirements for ROS in accordance with the MCP (310 CMR 40.0893[2]):

- The Phase III RAP was completed on July 14, 2008. The Phase IV RIP was completed on August 10, 2009.
- A final inspection has been performed and confirmed that the CRA has been constructed and implemented in accordance with the Phase IV RIP and is meeting projected design standards to achieve a Permanent Solution.
- Each source of oil and/or hazardous material (OHM) is controlled at the Site. Non-aqueous phase liquid (NAPL) is not visibly present at the Site. Any dense non-aqueous phase liquid (DNAPL) that may be present is not migrating and exists in a stable configuration. The Phase III demonstrated that it is not feasible to eliminate DNAPL at the Site. The dissolved-phase groundwater plumes and vapor plumes are stable and are not causing an increase in concentrations of VOCs in groundwater, soil, soil vapor, or indoor air. There are no unpermitted releases of OHM at the Site.
- Any substantial hazards have been eliminated as documented in the Substantial Hazard Evaluation (SHE) completed by ARCADIS U.S., Inc. (ARCADIS) of Chelmsford, Massachusetts in August 2011. ARCADIS also completed a Site-wide Method 3 Risk Characterization in August 2015, and GEI routinely performs Method 3 risk screening for additional indoor air data collected since 2015. Based on these risk evaluations, and based on the performance of individual EPMMs, a condition of NSR exists for current and future building occupants at each property within the Site.
- GEI has identified the longest duration of a shutdown of each active EPMM (AEPMM) that would be consistent with levels of exposure that do not pose an Imminent Hazard (IH) and poses a condition of NSR.

Construction and implementation of the CRA have been completed; additional activities, such as operation and monitoring of active remedial systems, or installation of new EPMMs, will be conducted under Phase V. The Site will operate in ROS until a Permanent Solution is achieved, except for any portions of the Site that may be closed under Partial Permanent Solution Statements (PSSs) with or without Conditions. Operating the SSDS and SVE systems, together with MNA, will ultimately achieve a Permanent Solution for the Site.

GEI will continue to conduct annual operation, maintenance, and/or monitoring (OMM) activities for installed EPMMs where sufficient indoor air sampling has been conducted, and not repeat indoor air testing, to confirm continued system effectiveness. GEI also conducts groundwater sampling and analysis as part of the MNA program.

1.3. Purpose and Scope

The Site entered Phase V with the submittal of the Phase IV FIR/Phase V ROS on August 4, 2011. In accordance with the MCP (310 CMR 40.0892), this Phase V Status Report No. 27 and RMR No. 42 includes the following information regarding the remedial actions being conducted at the Site:

- A description of the type and frequency of OMM activities.
- A description of any significant modifications made to the OMM activities since the last reporting period.
- An evaluation of the performance of the remedial action during the reporting period, including whether the remedial action is achieving remedial goals specified in the Phase IV RIP as described in 310 CMR 40.0874(3), and a description of any conditions or problems noted during the reporting period that are or may be affecting the performance of the remedial action.
- A description of the measures taken to correct any conditions or problems that may have been encountered during the reporting period.
- The name, license number, signature, and seal of the LSP.

This report covers the period from June 16 through December 15, 2024. Details of the engineering concepts, design criteria, construction plans, and specifications were previously provided to MassDEP as part of the Phase IV RIP, IRA Status Reports, RMRs, and IRA Plan Modifications and are not revisited in this report.

1.4. Public Involvement (310 CMR 40.1400)

UniFirst and GEI conducted a series of community meetings to inform property owners, residents, and City of Somerville (the City) officials about the Site. GEI will provide copies of this Phase V Status Report No. 26 and RMR No. 41 to the local public document repository that was established for the Site at the Somerville Central Public Library. The Somerville Public Library has made documents available on the Internet Archive: (<https://archive.org/details/somervillepubliclibrary?tab=collection&query=GEI+Consultants&sort=-date>) .

This report was submitted through eDEP (Transaction No. 1655442) on February 11, 2025. A draft copy of the eDEP Transmittal Form (BWSC-108) is provided in Appendix A.

Copies of property owner notification letters, including notice of sampling letters, chemical testing results letters, and other miscellaneous correspondence sent during the reporting period, are in Appendix B. A table summarizing in-person communication with residences is also included in Appendix B.

2. GLX Project

2.1. Background

The Massachusetts Bay Transit Authority (MBTA), through its contractor GLX Constructors (GLXC), has completed the extension of MBTA Green Line service to Union Square in Somerville and beyond to College Avenue in Medford. The GLX Project included significant infrastructure improvements near and through the Site, including a new pump station, reconstruction of the bridge passing over Washington Street, new train tracks within the MBTA right-of-way (ROW), a new train station, and utility improvements. The MBTA, GLXC, and their contractors initiated three RTNs related to construction activities undertaken at the Site. Chris McDermott of TRC Environmental of Lowell, Massachusetts, a subcontractor to GLXC, is the LSP of Record for GLXC.

2.2. RTN 3-35528

On April 12, 2019, TRC, on behalf of GLXC, filed a Utility-related Abatement Measure (URAM) Plan for managing potentially contaminated soil and dewatered groundwater associated with installing a stormwater conveyance system within and adjacent to the MBTA ROW and the demolition and replacement of the existing Washington Street Pump Station. TRC estimated up to 6,000 cubic yards of soil would be generated under the URAM.

On August 7, 2019, TRC filed a URAM Completion Report for RTN 3-35528. The report stated that 1,950 cubic yards of soil were excavated and managed under the URAM. Some of the soil was stockpiled within the ROW and some was transported offsite and stockpiled at MBTA-owned property at North Point in Cambridge, Massachusetts, and the Vehicle Maintenance Facility (VMF) in Somerville, Massachusetts.

In the URAM Completion Report, TRC states that all future soil originating from the Site and the ROW adjacent to the Site would be managed under a July 2019 RAM Plan for RTN 3-34742, and that all disposal documentation related to soil, sediment and granulated activated carbon (GAC) change outs would be submitted in Release Abatement Measure (RAM) Status Reports for RTN 3-34742.

2.3. RTN 3-34742

On January 23, 2018, MBTA filed a Release Notification Form (RNF) for concentrations of PCE detected in the wet well within the pump station located at 132 Washington Street. MassDEP issued RTN 3-34742. On April 25, 2019, MassDEP issued MBTA a Notice of Noncompliance for failure to submit a Permanent Solution Statement, Tier Classification Submittal, or Downgradient Property Status (DPS) Submittal within one year of the RNF. In June 2019, Weston & Sampson, on behalf of MBTA, filed a DPS Submittal attributing conditions reported in the RNF to the Site.

2.3.1. Release Abatement Measure

On July 11, 2019, TRC, on behalf of GLXC, filed a RAM Plan under RTN 3-34742 for management of CVOC impacted soil encountered during GLX Project activities within Site boundaries. According to TRC, up to

14,000 cubic yards of CVOC impacted soil were to be managed under this RAM, inclusive of the soil that was originally identified in the URAM for RTN 3-35528. TRC conducted in-situ soil sampling along the MBTA ROW behind the 50 Tufts Street building. Concentrations of PCE were detected up to 14 ppm.

TRC, on behalf of GLXC, filed nine RAM Status Reports between November 2019 and November 2023 and a RAM Completion Report on May 7, 2024. A summary of the volume of remediation waste disposed off-site during each Status Report reporting period is summarized in Table 2-1 along with the totals reported in the RAM Completion Report. The total cubic yard for each facility based on the summation from the Status Reports and reported in the RAM Completion likely do not agree based on the estimating the number of cubic yards per ton. This estimate is based on a uniform conversion of 1.7 tons per cubic yards which is likely variable.

All soil disposed off-site prior to April 3, 2020, was disposed of as a listed hazardous waste regardless of the concentration of PCE and TCE in the soil and no effort was made by TRC, GLXC or the MBTA to reclassify the soil as non-hazardous waste by requesting a Contained-In Determination from MassDEP. A substantial amount of soil excavated after February 2020 was which would have been classified as hazardous waste was reclassified with Contained-In Determinations (Section 2.5).

The RAM Completion Report also summarizes the groundwater treatment and discharge activities conducted as part of the RAM. Groundwater management was conducted between April 25, 2019, and August 31, 2020. During May 2019 sampling, PCE was detected exceeding effluent limits; corrective actions included refreshing the granular activated carbon. As part of system deactivation, a total of 48.87 tons of solid hazardous waste was transported to Michigan Disposal Treatment Plant in Bellville, MI; additionally, 400 pounds, consisting of spent filter bags and accumulated soil, was transported to Wayne Disposal, Inc., in Bellville, MI.

In 2014 the plume was stable. Construction dewatering occurred between 2019 and 2020 shifting the plume to the south by 200-to-300 feet, though within the existing Site boundaries. This is illustrated by comparing a visualization of the plume in 2014 (prior to construction dewatering) and 2020 (Fig. 2-1). The post-construction contours also indicate that the water table was lowered in Washington Street as a result of the GLX project.

2.4. Vehicle Maintenance Facility (VMF) Contained-in Determinations

Soil potentially containing hazardous wastes from RTN 3-34742 was used by GLXC during the construction of a clean soil cap at the GLX's VMF, outside the boundaries of RTNs 3-34742 and 3-23246. Construction of the cap began in 2018, primarily consisting of soil brought to the VMF from other parts of the GLX project, but included soil brought from RTN 3-35528 in July 2019. GLXC transported and disposed of soil from RTN 3-34742 likely known to be contaminated with PCE, to the VMF since the concentrations of PCE were less than site-specific acceptance criteria consistent with the MassDEP's "Similar Soils" guidance. However, GLXC did not consider at that time the soil was potentially a listed hazardous waste.

Subsequently, in October 2020, soils were generated from within the VMF cap during grading and utility excavation activities and were stockpiled. The stockpiled soils were sampled, and concentrations of PCE and TCE were detected above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standards for a Contained-In Determination.

On February 21, 2021, GLXC prepared the first of four Contained-In Determinations (February 26, April 8, April 26, and June 30, 2021) for soils stockpiles generated during cap regrading and utility installation at the VMF. It is unknown if the soils were reused on the VMF site or disposed off-site.

2.5. Right-of-Way Contained-in Determinations

TRC prepared sixteen Contained-In Determinations for soil generated near the Washington Street Pump Station and on the MBTA ROW. Soil included in the Contained-In Determination exhibited concentrations of PCE above the laboratory reporting limits but below the applicable MCP Method 1 S-1/GW-1 standard. A summary of the Contained-In Determinations is in Table 2-2.

2.6. RTN 3-30620

The GLX Project was issued a Special Projects Designation (SPD) in 2011. A RAM Plan was submitted in for the management of soil and groundwater on numerous MCP disposal sites across the GLX Project in 2015. On July 18, 2019, TRC, on behalf of GLXC, filed RAM Status Report No. 7, that included activities associated with RTN 3-23246, the 50 Tufts Street Site. According to TRC, approximately 5,440 cubic yards of soil were excavated from within the Site boundary as part of GLX Project activities conducted under the SPD. The Status Report also explained that a separate RAM Plan had been submitted to MassDEP under RTN 3-34742 for work within the disposal site boundary of RTN 3-23246 and that details regarding soil management, for the current stockpiles and future construction activities, within the boundary of RTN 3-23246 will be provided in RAM submittals for RTN 3-34742.

2.7. Soil Characterization Data from MBTA ROW and Washington Street

Between May 2010 and September 2023, soil samples were collected by Kleinfelder of Cambridge, Massachusetts, on behalf of the MBTA, or TRC, on behalf of GLXC to characterize soil for off-site disposal within the MBTA right of way (ROW), including Washington Street. The date of sampling and the reference location where the sampling is documented is in Table 2-3. The ROW sample locations are on Fig. 2-2, and a summary of the soil analytical results are in Appendix C.

2.8. Underdrain System in Washington Street

2.8.1. Background and Design Concept of Underdrain System

The MBTA installed an underdrain system beneath Washington Street at the MBTA railway overpass for the stated purpose of depressing the groundwater level below the roadway at the overpass to prevent the groundwater from exerting an upward water pressure on the pavement. The underdrain system was designed to perform a separate function from the new storm water collection and drainage system within the roadway.

Due to the potential for chlorinated volatile organic compounds (CVOCs) to be present in groundwater beneath Washington Street, the MBTA included a distribution pipe in the design to convey the groundwater collected in the underdrain system to a two-chambered vault at the corner of Tufts and Washington Streets (referred to in design documentation as WS212). The design intent of the vault was that, if treatment is required for the collected groundwater, the water can be pumped from the influent

chamber of the vault, treated, discharged back to the effluent chamber of the vault, and discharged into the storm water drainage system.

The concept design for the underdrain system is shown schematically on Figs. 2-3 and 2-4. It consists of perforated underdrain piping located beneath both the north and south sides of Washington Street (shown in blue) that flow into deeper distribution piping (shown in red) that conveys the water to the vault. The system is designed so that groundwater collected by the south underdrain can be diverted to the storm water drainage system if CVOC concentrations in groundwater collected in this portion of the system are sufficiently low that treatment is not required.

The GLX underdrain design drawing (DP-21) is shown on Fig. 2-5. In January 2020, prior to construction of the underdrainage system, the MBTA provided GEI an opportunity to review the latest system design. GEI discussed its review with the GLX project team in a meeting on February 6, 2020 and in a memo of February 11, 2020. GEI identified that a portion of the distribution piping (red) was perforated and that this should be changed to solid pipe to prevent infiltration of CVOCs that may be present in the area. MBTA agreed at the meeting to use solid pipe for all the distribution piping. In our memo June 9, 2021 (Appendix D) to Michael Clark of the BSC Group we summarize our discussions with the MBTA regarding the drainage system, and their commitment to change the perforated to solid pipe.

2.8.2. Effect of Perforated Distribution Pipe

In November 2020, the MBTA notified GEI that its suggestion regarding the use of solid pipe for the distribution pipe would not be incorporated into the final design. MBTA indicated that the change from certain perforated pipe to solid pipe beneath Washington Street would have impacted the schedule, as the solid pipe had a long lead time. Accordingly, the pipe network, including the perforated distribution pipe, was installed as indicated on the original DP-21 design drawings.

Because some of the distribution piping (red on Figs. 2-3 and 2-4) is perforated, it collects groundwater rather than just transporting the groundwater collected in the underdrain piping to the vault. The distribution pipe (red) was installed below the water table at an elevation several feet below the underdrains (blue); therefore, it collects groundwater from a greater depth and an area beyond the drainage zone of the perforated underdrainage pipes.

Based on the distribution of CVOCs measured in groundwater in the area, the perforated distribution pipe draws water from zones that likely contain higher concentrations of CVOCs, resulting in higher levels of CVOCs entering the collection system. The concentrations of CVOCs would likely be higher because the perforated distribution pipe (red) near the vault is both closer to areas of highest CVOC concentrations in groundwater and deeper within the water column than the underdrain pipe (blue) which monitoring has shown to be more heavily impacted than shallow groundwater.

Moreover, the perforated distribution pipe continuously draws water, affecting the location of the contaminant plume. As a result of the GLX construction, the plume has been permanently relocated to the south as shown in the plume visualization from 2022 (Fig. 2-1) two years following the completion of construction dewatering. Although the drainage system has shifted the plume 200-300 feet to the south, new receptors have not been affected since the shift is mostly contained to Washington Street.

3. Current Conceptual Site Model and Disposal Site Boundary

As defined in the MCP, the Conceptual Site Model (CSM) is a “dynamic framework for assessing site characteristics and risk, identifying and addressing data gaps and managing uncertainty, eliminating or controlling contaminant sources, developing and conducting response action strategies, and evaluating whether those strategies have been effective in achieving desired endpoints.” (310 CMR 40.0006). GEI has developed and continued to update the CSM for the Site as appropriate based upon the investigation data documented in previous reports, including the Phase II Comprehensive Site Assessment, Immediate Response Action (IRA) Plan and Status Reports, the Phase IV Remedy Implementation Plan (RIP), and prior Phase V Remedy Operations (ROS) Status Reports. In 2014, in Phase V Status Report No. 6, GEI updated the CSM and Disposal Site Boundary to include groundwater data collected by the MBTA. In Phase V Status Report No. 17, GEI updated the CSM and Disposal Site Boundary to include a portion of the MBTA ROW near Cross Street where de minimis PCE concentrations were detected in soil samples collected for construction purposes.

4. Data Collection

4.1. Groundwater Sampling

GEI conducted groundwater sampling at one monitoring well (MW104R) in September 2024 and five monitoring wells (MW104R, MW112A, MW118D, MW121D, and MW122) in November 2024. GEI installed replacement well MW104R in May 2022. The location of MW104R was adjusted slightly south and is located adjacent to the MBTA underdrain vault. Groundwater monitoring well MW104R was intended to be a replacement well for MW104 which was destroyed by the MBTA during its GLX project. MBTA excavation activities affected installation of the replacement well because the southern portion of the 50 Tufts Street property was heavily re-worked as part of construction. The screen for MW104R is approximately 2 feet deeper than MW104 and is also approximately 25 feet south of MW104.

During the April 2024 groundwater sampling event, concentrations of PCE in MW104R (2,200 µg/L), were substantially greater than observed in the destroyed MW104 (less than 20 µg/L since 2009) which was last sampled in 2018. GEI sampled MW104R twice during this reporting period, in September and November 2024, where concentrations of PCE were detected at 510 µg/L and 620 µg/L, respectively. The concentrations in MW104R are higher than in MW104 and do not likely represent the same data set because:

- the groundwater samples are collected from a deeper interval;
- the location of MW104R is further south than former MW104; and
- MBTA construction activities—dewatering between 2019 and 2020 and installation of the perforated distribution line—have permanently relocated the plume center of mass southward.

The groundwater samples collected during this period were analyzed by Alpha Analytical (Alpha), a Pace Laboratory, of Westborough, Massachusetts for VOCs. A summary of all GEI groundwater sampling activities at the Site, including dates of sampling during this reporting period, is in Table 4-1. The groundwater testing results are summarized in Table 4-2, along with groundwater data from previous investigations. Groundwater sampling conducted on behalf of the MBTA between 2012 and 2014 by Kleinfelder, and in 2020 by TRC, as part of the GLX Project is summarized in Table 4-3.

Monitoring well locations and the monitoring wells sampled by GEI during this reporting period are shown in Fig. 4-1. The laboratory data reports associated with the September and November 2024 groundwater testing is in Appendix E.

4.2. Comparison of PCE Concentrations to GW-2 Standards

Fig. 1-2 presents the disposal site boundary, based on laboratory analytical results for environmental samples collected through November 2024. Fig. 1-2 also delineates the areas in which concentrations of PCE in shallow groundwater (i.e., 15 feet or less) exceed current Method 1 GW-2 standards (20 µg/L), based on Site-wide groundwater sampling results through November 2024. We updated the plume delineation to include the April, September, and November 2024 sampling results from MW104R (Fig. 1-2) which extends the 20 µg/L concentration contour further into Washington Street.

Since 2006, GEI has conducted extensive sub-slab soil vapor and indoor air testing at the properties within the Site including where PCE in shallow groundwater exceeds 20 µg/L, except for 159 Glen Street, where the owner has been unresponsive to access request letters and property visits seeking access to conduct sampling. We do not anticipate that additional investigation will be required in response to the updated Method 1 GW-2 standard for PCE.

4.2.1. Groundwater Plume Stability

Based on historical groundwater sampling conducted since 2006, the nature and extent of groundwater contamination at the Site has been well-characterized. In addition, groundwater analytical results are incorporated into the MNA program to support the plume stability monitoring and natural attenuation evaluation, as discussed in Section 9.

4.3. Soil Vapor Sampling

From January 2006 through December 15, 2024, GEI collected soil vapor samples at 58 residences and commercial buildings. Fig. 4-2 shows buildings where GEI conducted soil vapor sampling. The procedure for collecting soil vapor samples was in IRA Status Report No. 3. Samples typically were collected from below the basement slab.

During this reporting period, GEI collected sub-slab samples from two residential properties (31 Tufts Street and 10 Morton Street) and from two mixed-use properties (103 Washington Street and 105 Washington Street). The property at 31 Tufts Street is new residential development. The property at 10 Morton Street is a multi-family home undergoing renovation. The property at 103 Washington Street is a new development completed in 2024 replacing an auto repair shop. The property at 105 Washington Street is a new development completed in June 2022 replacing a multi-family home. Both 103 Washington Street and 105 Washington Street are a mixed-use development with commercial space and open-air parking on the first floor and residential units above.

The sub-slab soil vapor samples were submitted to Alpha for laboratory analysis by EPA Method TO-15 with the following modified list of analytes:

- 1,1-Dichloroethane
- 1,1-Dichloroethylene (1,1-DCE)
- trans-1,2-Dichloroethylene
- cis-1,2-Dichloroethylene
- 1,1,1-Trichloroethane (TCA)
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)
- Vinyl Chloride

The sub-slab soil vapor testing results are in Table 4-4 (31 Tufts Street), Table 4-5 (10 Morton Street), Table 4-6 (103 Washington Street), and Table 4-7 (105 Washington Street). The laboratory data reports are in Appendix E.

4.3.1. Soil Vapor Sampling – Checklists and Methods

GEI collected sub-slab soil vapor samples from 31 Tufts Street, 10 Morton Street, 103 Washington Street, and 105 Washington Street. Sub-slab soil vapor samples were collected to evaluate the concentrations of chlorinated VOCs in soil vapor beneath the buildings. GEI collected soil vapor samples using SUMMA® canisters and regulators provided by Alpha. Each canister was certified clean. Copies of the certifications are in Appendix E. The soil vapor samples were collected over a 1-hour period.

Flow regulators were attached to the SUMMA® canisters at the location of the testing. The laboratory-set flow regulator was then turned on, and the starting pressure and time recorded. The regulator was turned off before reaching ambient pressure, and the final pressure and time were recorded. Sub-Slab Monitoring Point Installation Logs, Pre-Sampling Checklists, and Sub-Slab Sampling Checklists completed for the sub-slab soil vapor samples collected during this reporting period are in Appendix F.

4.3.2. Soil Vapor Sampling – Results

- 31 Tufts Street – On September 6, 2024, two soil vapor samples from the previously installed sub-slab monitoring points were collected from beneath the building slab. Concentrations of PCE were detected above laboratory reporting limits at 94.9 µg/m³ and 61.4 µg/m³, in SV1 and SV2, respectively. Additionally, 1,1-Dichloroethane (0.356 µg/m³), 1,1-DCE (0.174 µg/m³), trans-1,2-DCE (0.083 µg/m³), TCA (7.47 µg/m³), and TCE (2.09 µg/m³) were detected in SV1, and 1,1-Dichloroethane (0.546 µg/m³), cis-1,2-DCE (0.083 µg/m³), TCA (14.60 µg/m³), and TCE (4.58 µg/m³) were detected in SV2. Concentrations of chlorinated VOCs in soil vapor are below the applicable residential sub-slab soil gas Screening Values (SSGSV).
- 10 Morton Street – On October 9, 2024, two soil vapor samples from the previously installed sub-slab monitoring points were collected from beneath the building slab. Concentrations of PCE were detected above laboratory reporting limits at 12.6 µg/m³ and 16.3 µg/m³ in SV5 and SV6, respectively. Additionally, cis-1,2-DCE (0.153 µg/m³), trans-1,2-DCE (336 µg/m³), and TCE (0.228 µg/m³) were detected in SV5, and cis-1,2-DCE (0.107 µg/m³) and trans-1,2-DCE (291 µg/m³) were detected in SV6. The concentration of trans-1,2-DCE in both SV5 and SV6 is greater than the applicable residential SSGSV, however, trans-1,2-DCE has not historically been a primary contaminant of concern in groundwater or soil gas at the Site. We are evaluating construction materials used during the basement renovation to determine if residual confounding substances are affecting the sub-slab soil gas sampling results.
- 103 Washington Street – On December 4, 2024, two soil vapor samples from the previously installed sub-slab monitoring points were collected from beneath the building slab. Concentrations of PCE were detected above laboratory reporting limits at 2.87 µg/m³ and 60.7 µg/m³, in SV1 and SV2, respectively. Additionally, TCE (0.333 µg/m³) and TCA (0.115 µg/m³) were detected in SV1, and TCE (28.9 µg/m³), TCA (0.218 µg/m³), 1,1-Dichloroethane (0.125 µg/m³), cis-1,2-DCE (6.94 µg/m³), and trans-1,2-DCE (1.38 µg/m³) were detected in SV2. The concentration of TCE in SV2 is greater than the applicable residential SSGSV, but below the commercial SSGSV. The first floor of the building is commercial space.
- 105 Washington Street – On December 4, 2024, one soil vapor sample from a previously installed sub-slab monitoring point, SV2, was collected from beneath the building slab.

Concentrations of PCE were detected above laboratory reporting limits at 1.20 µg/m³ in SV2. Additionally, TCE (0.263 µg/m³), cis-1,2-DCE (0.091 µg/m³), and 1,1,2-Trichloroethane (0.115 µg/m³) were detected in SV2. Concentrations of chlorinated VOCs in soil vapor are below the applicable residential SSGSV.

4.4. Indoor Air Sampling

From January 2006 through December 15, 2024, GEI collected indoor air samples at 75 residences and commercial buildings. Fig. 4-2 shows buildings where GEI conducted indoor air sampling. The procedure for collecting indoor air samples was in IRA Status Report No. 3. Samples are typically collected from the basement and first floor of each building.

During this reporting period, GEI collected indoor air samples at 31 Tufts Street, 103 Washington Street, and 105 Washington Street. The indoor air samples were submitted to Alpha for laboratory analysis by EPA Method TO-15 with the following modified list of analytes:

- 1,1-Dichloroethane
- 1,1-Dichloroethylene (1,1-DCE)
- trans-1,2-Dichloroethylene
- cis-1,2-Dichloroethylene
- 1,1,1-Trichloroethane (TCA)
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- Tetrachloroethylene (PCE)
- Trichloroethylene (TCE)
- Vinyl Chloride

The recent and historical indoor air testing results are in Table 4-8 (31 Tufts Street), Table 4-9 (103 Washington Street) and Table 4-10 (105 Washington Street). The laboratory data reports are in Appendix E.

4.4.1. Indoor Air Sampling – Checklists and Methods

GEI collected indoor air samples from 31 Tufts Street, 103 Washington Street, and 105 Washington Street. The indoor air samples were collected to evaluate if there was likely a complete vapor intrusion pathway in the buildings' occupied space. The samples were collected using SUMMA[®] canisters and regulators provided by Alpha. Each canister was certified clean by Alpha. Copies of the certifications are in Appendix E. The indoor air samples were collected over an approximately 24-hour period.

Flow regulators were attached to the SUMMA[®] canisters at the location of the testing. The SUMMA[®] canisters were placed so that the air inlet was approximately 3 to 5 feet above the floor. The laboratory-set flow regulator was then turned on, and the starting pressure and time were recorded. The regulator was turned off before reaching ambient pressure, and the final pressure and time were recorded. Pre-Sampling Checklists and Indoor Air Sampling Checklists completed for each indoor air sample collected during this reporting period are in Appendix F.

4.4.2. Indoor Air Sampling – Results

- 31 Tufts Street – On September 6, 2024, five indoor air samples were collected on the first floor in four units and the utility room. PCE was detected above the laboratory reporting limits in two of

the units and in the utility room, at concentrations of $0.604 \mu\text{g}/\text{m}^3$, $0.210 \mu\text{g}/\text{m}^3$, and $0.142 \mu\text{g}/\text{m}^3$ in samples IA1 (unit 104), IA3 (utility room), and IA5 (unit 102), respectively. 1,1-dichloroethane was detected in IA1 at a concentration of $0.134 \mu\text{g}/\text{m}^3$. Trans-1,2-DCE was detected in all five samples at concentrations between $0.119 \mu\text{g}/\text{m}^3$ and $0.167 \mu\text{g}/\text{m}^3$. Concentrations of chlorinated VOCs are below the residential Threshold Values (TVs). No other chlorinated VOCs were detected in the samples at concentrations above the laboratory reporting limits.

- 103 Washington Street – On December 4, 2024, one indoor air sample was collected on the first floor, one indoor air sample was collected in the basement, and two indoor air samples were collected on the second floor (Unit 1 and Unit 3). The first floor is commercial or ancillary space associated with residences on the second floor. PCE was detected above the laboratory reporting limits in each sample at concentrations of $0.251 \mu\text{g}/\text{m}^3$ (first floor), $0.888 \mu\text{g}/\text{m}^3$ (basement), $0.176 \mu\text{g}/\text{m}^3$ (Unit 1), and $0.264 \mu\text{g}/\text{m}^3$ (Unit 3). Concentrations of chlorinated VOCs are below the residential TVs. No other chlorinated VOCs were detected in the samples at concentrations above the laboratory reporting limits.
- 105 Washington Street – On December 4, 2024, one indoor air sample was collected on the first floor, two indoor air samples were collected in the basement, and one indoor air sample was collected on the second floor. The first floor is commercial or ancillary space associated with residences on the second floor. PCE was detected above the laboratory reporting limits in each sample, at concentrations of $1.40 \mu\text{g}/\text{m}^3$ (first floor), $1.37 \mu\text{g}/\text{m}^3$ (basement [B1]), $0.312 \mu\text{g}/\text{m}^3$ (basement [B2]), and $0.400 \mu\text{g}/\text{m}^3$ (second floor). Additionally, TCE was detected at a concentration of $0.107 \mu\text{g}/\text{m}^3$ on the first floor. The concentration of PCE in the first-floor sample was detected at a concentration equal to the residential TV, but below the commercial TV.

4.5. Meteorological Conditions

Measurements were taken with a portable barometer and thermometer during soil vapor sampling at and were recorded on the Indoor Air and Sub-Slab Sampling Checklists (Appendix F). Meteorological conditions recorded during indoor air sampling events for this reporting period are summarized in Table 4-11.

4.6. Boring and Monitoring Well Installation

On October 15 and October 31, 2024, GEI observed Northern Drill Service, Inc. of Northborough, Massachusetts (Northern) install one soil boring completed as a monitoring well (MW111R). The location was first precleared to 5 feet via vacuum excavation. MW111R is located within the street in front of 17 Knowlton Street. The boring was installed as a replacement monitoring well as the original well, MW111, was destroyed during fire hydrant replacement work in the area. During the initial drilling on October 15, shallow refusal was encountered at each attempted location. Northern returned on October 31, 2024, and completed the boring and well installation. The final boring was installed using drive and wash drilling methods.

Soil samples collected from the borings were continuously logged (lithology and physical observations) in accordance with the USCS guidelines. Field screening for VOCs in the jar headspace for soil samples was performed with a PID equipped with a 10.6 eV lamp. PID field screening results are summarized on the boring log in Appendix G. Jar headspace screening results were 0.1 ppm.

The boring was advanced to a depth of 15 feet. Monitoring well MW111R was installed with a well screen interval from 5 to 15 feet. The monitoring well was constructed of 2-inch diameter PVC.

4.7. Hydraulic Flow Data Loggers

GEI installed vented Level TROLL 500 Data Loggers in MW104R on December 27, 2023, and MW203R and SH-MW2R on April 12, 2024. GEI installed well MW104R in May 2022. The data loggers were installed to evaluate long term groundwater flow trends in this portion of the Site, which was heavily influenced by the GLX construction. GEI has downloaded the data approximately every four weeks and will continue to monitor groundwater elevations monthly. Between April 21 and May 7, 2024, the transducer in MW203R was above the height of the groundwater table; when GEI collected data on May 7, the transducer was lowered in the well. Hydrographs for the three monitoring wells are included in Appendix H.

5. Capuano Center

5.1. Background

The mitigation system at the Capuano Center is an SSDS with 18 sub-slab extraction points in six classrooms of the east wing. The interior slab/exterior wall joints of the six classrooms were sealed with a flexible epoxy sealant and extraction points were installed horizontally through the exterior wall. GEI began operating the SSDS on February 1, 2007.

The system sub-slab vapor extraction points are attached to three collection headers in exterior underground trenches, which are connected to three dedicated discharge pipes with radon fans for each collection header above the roofline of the Capuano Center. Remote telemetry on the system consists of two radio nodes and three pressure switches connected to the three radon fans to send notification of a system shut down remotely to the wireless remote monitoring hub located at the Property.

The system does not include off-gas treatment. Based upon the measured flow rate and VOC concentrations, the annual discharge rate of VOCs from the system has been significantly less than 100 lbs per year; therefore, off-gas treatment is not required per MassDEP Policy No. WSC-94-150: "Off-gas Treatment of Point-Source Remedial Air Emissions," dated 1994.

5.2. Remedial Objectives

The design objectives of the Capuano Center mitigation system were to:

- Eliminate or mitigate, to the extent feasible, the potential soil vapor migration pathway to indoor air.
- Achieve a condition of NSR for occupants of the Capuano Center.

The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS influences the southern portion of the east wing. In conjunction with the physical sealing of the slab/wall joint, this indicates the soil vapor migration pathway to indoor air is controlled by the system.

5.3. Inspection and Monitoring

The system has been monitored in accordance with the requirements and schedule in the Phase IV RIP, and in accordance with the requirements and schedule presented in subsequent Phase IV Status Reports, and the Phase IV FIR/Phase V ROS.

Monitoring of the system was historically performed monthly; however, once telemetry was installed on the system, GEI began performing quarterly monitoring in July 2015. Monitoring of system parameters at the headers (flow rate, vacuum, and photoionization detector [PID] readings) and PID readings at outdoor monitoring points are conducted quarterly. Inspection and monitoring at the Capuano Center were performed twice from June to December 2024. A summary of monitoring activities conducted during this reporting period is in Table 5-1 and the Field Monitoring Forms are in Appendix I.

5.4. System Modifications

GEI was notified by the telemetry system of the shutdown of the fan installed in Manifold 12 on June 23, 2023. Following an investigation of the fan's performance, a new fan was ordered and installed on August 24, 2023. Following system start up, GEI received an alert from the telemetry system that the fan was running.

5.5. Performance Efficiency and Effectiveness

GEI has completed 24 rounds of indoor air sampling in the Capuano Center. The results of each round of sampling show that the system is meeting remedial design objectives (Table 5-2). Based on the indoor air testing results, and regularly collected system performance data, the soil vapor migration pathway to indoor air has been eliminated and a condition of NSR has been achieved for occupants of the Capuano Center. GEI has discontinued indoor air sampling and relies on monitoring of operating parameters for the system to confirm continued effectiveness.

5.6. Management of Waste Materials

Infrequently, condensate in system piping may accumulate in the subsurface collection header pipes, or the cleanout drain for the header pipes. If observed, SSDS condensate will be pumped from the headers into the cleanout, which drains into the subsurface at the property.

5.7. Future Phase V Activities

Based on indoor air testing results, a condition of NSR has been achieved for occupants of the Capuano Center and the system is achieving the remedial design objectives. Since remote telemetry is now installed on the system, GEI will continue to monitor operational parameters and sub-slab conditions for the system (e.g., flow rate, vacuum), and collect readings from all outdoor monitoring points quarterly, to confirm ongoing system performance. GEI discontinued monitoring at interior monitoring points in April 2016, and instead relies on vacuum monitoring at exterior monitoring points to evaluate system effectiveness. During monitoring events, GEI will also perform maintenance tasks, which may include draining accumulated water from the collection headers and correcting any issues observed during routine inspection of system components.

5.7.1. Longest Allowable Duration of AEPMM Shutdown

An operating regime and OMM plan for the Capuano Center AEPMM were included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011. In accordance with the MCP (310 CMR 40.1026[3][e]), and as presented in Status Report No. 7 and RMR No. 22, the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR is 6 years for the Capuano Center system.

5.7.2. Regulatory Closure

As discussed further in Section 6.6, a Permanent Solution with Conditions can be achieved for properties where an AEPMM has achieved the remedial objectives, an AUL has been recorded for the property, and

telemetry is installed. A Partial Permanent Solution with Conditions Statement may be submitted to achieve regulatory closure for the Capuano Center if the owner of the property, the City of Somerville, executes an AUL.

6. Residential and Commercial Properties

6.1. 103 and 105 Washington Street

The properties at 103 and 105 Washington Street have been redeveloped into mixed-use commercial and residential buildings by the same entity without the installation of an EPMM and GEI has been evaluating the likelihood of a complete vapor intrusion pathway.

6.1.1. 103 Washington Street

The building at 103 Washington Street, formerly an automobile repair shop, was demolished around March 2019. The former AEPMM was deactivated in May 2017 when the building was vacated. 103 Washington Street has been redeveloped as a mixed-use development with commercial space and open-air parking on the first floor and residential units above. GEI reached out numerous times to the developer regarding installing a vapor mitigation system at 103 Washington Street. The developer did not agree to installation of a system, although they did consent to soil gas and indoor air testing. As of February 2024, construction is complete, and the building is occupied. GEI has conducted indoor air and sub-slab soil vapor sampling in May 2023, July 2023, March 2024, and December 2024 as discussed in Section 4.

In May 2023, GEI conducted sub-slab soil vapor sampling in the basement, and indoor air sampling in the first-floor commercial space. Concentrations of PCE and TCE were detected above the residential sub-slab soil vapor screening value in one sample but below the commercial screening value. The indoor air sample collected on the first floor did not exceed commercial or residential TVs.

In July 2023, GEI conducted sub-slab soil vapor sampling in the basement, and indoor air sampling in the basement and first floor commercial space. Concentrations of TCE were detected above the commercial sub-slab soil vapor screening value in one sample. Concentrations of PCE in the same sample exceeded the residential sub-slab soil vapor screening value. Concentrations of trans 1,2-DCE, PCE, and/or TCE in indoor air samples collected on the first floor and basement were detected above residential TVs, however they were not above commercial TVs. The first floor is commercial space or open-air parking with residential units above.

In March 2024, concentrations of TCE were detected above the commercial sub-slab soil vapor screening value in one sample. Concentrations of cis-1,2-DCE, trans-1,2-DCE, and PCE in the same sample were greater than the laboratory reporting limit but less than the residential SSGSV. Concentrations of PCE in the indoor air sample collected from the basement were greater than the reporting limits, but less than residential TVs; no other chlorinated VOCs were detected in the basement or first floor samples.

In December 2024, concentrations of TCE in subslab soil gas were detected above the residential SSGSV, but below the commercial SSGSV, in one of the two samples. Concentrations of PCE, TCA, 1,1-Dichloroethane, cis-1,2-DCE, and trans-1,2-DCE were also detected in samples but at concentrations less than the residential SSGSV. Concentrations of PCE in the four indoor air samples collected (one in the basement, one on the first floor, and two on the second-floor units) were greater than the reporting limits, but less than residential TVs; no other chlorinated VOCs were detected in the indoor air samples.

Additional sampling will be conducted in winter 2025.

6.1.2. 105 Washington Street

The building at 105 Washington Street, formerly a multi-family house, was demolished between March and June 2019 and construction on the development began in July 2019. As of June 2022, construction was complete, and the building is occupied. 105 Washington Street is a mixed-use development with commercial space and open-air parking on the first floor and residential units above.

GEI conducted sub-slab soil vapor sampling at 105 Washington Street prior to the completion of the building in August 2021. The concentration of PCE in the soil vapor samples ($133 \mu\text{g}/\text{m}^3$ and $110 \mu\text{g}/\text{m}^3$) exceeded the MassDEP residential soil vapor screening values ($98 \mu\text{g}/\text{m}^3$) for PCE. Therefore, GEI conducted sub-slab soil vapor and indoor air sampling in March 2022, February 2023, and May 2023 once the building was completed. Concentrations of VOCs were not detected above the MassDEP residential SSGSVs, or the residential indoor air TVs following completion of the building indicating that the vapor intrusion pathway is unlikely to be of concern under current or future conditions.

Additional sampling was conducted at 105 Washington Street in December 2024. Concentrations of PCE, TCE, cis-1,2-DCE, and 1,1,2-Trichloroethane were detected in the sub-slab soil vapor sample, but below residential SSGSV. Concentrations of PCE were detected in the four indoor air samples collected (two in the basement, one on the first floor, and one on the second floor). Concentrations of PCE detected were less than residential TVs, except on the first-floor which is commercial space, which was detected at a concentration equal to the residential TV but below the commercial TV. Additionally, TCE was detected in the first-floor sample, but at a concentration less than residential TVs.

6.2. EPMM Status

Through December 15, 2024, EPMMs have been installed or are being installed at 24 residential and commercial properties. Currently EPMMs are relied upon to meet the remedial objectives at 20 properties and are not being relied on at the following:

- The EPMM at 103 Washington Street, as discussed in Section 6.1.1, was abandoned when the building was vacated and then demolished as part of redevelopment. The redevelopment of the mixed-use building at 103 Washington Street did not include an EPMM because the new owner declined offers to include one.
- An EPMM was installed at 163 Glen Street when the former American Legion Post building was redeveloped as multi-family housing. It was later demonstrated that the EPMM was not required based on sub-slab soil gas sampling results that were below residential SSGSV.
- The EPMM at 10 Morton Street was temporarily removed during building renovation activities. A new EPMM has since been installed, as discussed in Section 6.5.1.1.
- An EPMM is in the process of being installed at 121 Washington Street, a mixed-use building with retail space on the ground floor and residences above but is not yet complete, as discussed in Section 6.5.3.1.

Fig. 6-1 shows the buildings with EPMMs installed. Table 6-1 presents the as-built design information for each installed EPMM. EPMMs were also installed at 50 Tufts Street, 60 Tufts Street, and the Capuano Center. The EPMMs at 50 Tufts Street, 60 Tufts Street, and the Capuano Center are discussed separately in this report.

The EPMM designs are categorized as Option 1, Option 2, Option 3, or Option 4, as conceptually defined below:

- Option 1 – SSDS: This option includes the installation of one or more sub-slab vapor extraction points and a collection piping network connected to an electric fan located outside the building envelope. The fan is equipped with a condensate bypass drain and the fan exhaust is discharged above the eave line of the roof. To date, no SSDSs (except for the system at the Property) require off-gas treatment. This option is installed in buildings with adequate sub-slab air flow and a competent concrete slab, or those properties where vapor barrier and venting systems are infeasible.
- Option 2 – Vapor Trench: The vapor trench option is a sub-slab venting system installed in a shallow trench around the interior basement perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the slab and stucco walls. The trench is backfilled with crushed stone and finished with approximately three inches of new concrete to meet the existing slab surface. This option is installed in buildings with poor sub-slab air flow, a competent concrete slab, and a fieldstone and/or brick foundation. Sub-slab vapors are vented through a piping network that exits the building envelope at the sill elevation and terminates above the eave line of the roof.
- Option 3 – New Slab: The new slab installation option is a new concrete slab, a sub-slab vapor barrier, and a floor venting system; applying cement stucco to the walls; and applying an epoxy vapor barrier to the new slab and stucco walls. This option is installed in buildings with poor sub-slab air flow, an incompetent concrete slab, and a fieldstone and/or brick foundation. As with Option 2, sub-slab vapors are vented through a piping network that exits the building envelope at the sill elevation and terminates above the eave line of the roof.
- Option 4 – Passive Vapor Mitigation in New Construction: This option has been installed in new construction buildings. A sub-slab venting system installed in gravel with riser pipes through the roof, a sub-slab vapor barrier, and new concrete floor. This option can be converted to an active system.

The decision-making process for selecting a conceptual design based on Site-specific conditions is illustrated in Fig. 6-2. Table 6-1 identifies the design option for each EPMM currently installed and the primary engineering components of each.

6.2.1. Remedial Objectives

The design objectives of the EPMMs were to:

- Eliminate or mitigate, to the extent feasible, the potential soil vapor migration pathway to indoor air in residential buildings.
- Achieve a condition of NSR for occupants of the residence or commercial building.

6.3. Option 1 EPMMs (SSDS)

Option 1 EPMMs consist of active sub-slab depressurization achieved by the installation of a radon fan and associated network of piping. Several of the Option 1 EPMMs were originally installed as Option 2 or Option 3 EPMMs; however, the concentrations of PCE measured in the post-installation indoor air did not constitute a condition of NSR, and a fan was installed. Option 1 EPMMs have been installed at the following 10 properties:

- 35-37 Knowlton Street (originally Option 3)
- 31-33 Knowlton Street
- 13 Morton Street
- 18 Morton Street
- 23 Tufts Street
- 103 Washington Street (deactivated May 31, 2017)
- 95 Franklin Street (originally Option 2)
- 9 Knowlton Street
- 13 Knowlton Street
- 27 Tufts Street (originally Option 3)

Prior to the MCP amendments effective June 20, 2014, these properties could not achieve a Permanent Solution because of the operation of an active system. These properties can now achieve regulatory closure with a Partial PSS with Conditions, provided that the property owner executes an AUL. The condition associated with the PSS would be operation and maintenance of the AEPMM in accordance with the AUL.

6.3.1. Operation and Monitoring

To confirm the performance of an EPMM, indoor air samples are collected shortly after installation is complete. As identified in the Phase IV FIR/Phase V ROS for Option 1 EPMMs, following the initial post-installation indoor air sampling, indoor air samples were collected one time per winter for two consecutive years. In accordance with MassDEP guidance, "WSC No. 16-435: Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure," dated October 14, 2016 (2016 VI Guidance), GEI modified the post-installation indoor air sampling for newly installed Option 1 EPMMs to demonstrate effectiveness. Once a pressure differential has been established, one round of indoor air sampling is performed during the heating season. The samples are analyzed for Site-specific chlorinated VOCs. Following one round of indoor air sampling, differential pressure across the slab will be used to demonstrate system effectiveness.

Inspection and monitoring also includes measuring VOCs at sub-slab sampling points with a PID, collecting pressure measurements using a manometer, and inspecting system components. If needed, repairs or modifications will be scheduled.

A summary of OMM activities performed for Option 1 EPMMs during this reporting period is in Table 6-2. During this reporting period GEI conducted EPMM inspections at 95 Franklin Street, 9 Knowlton Street, 13 Knowlton Street, 31-33 Knowlton Street, 35-37 Knowlton Street, 13 Morton Street, 18 Morton Street, and 23 Tufts Street. GEI was unable to access 27 Tufts Street during this reporting period. EPMM Inspection Forms are in Appendix J.

6.3.1.1. 35-37 Knowlton Street Renovation

Previously, GEI was unable to access 35-37 Knowlton Street for EPMM inspection; however, according to real estate records, the property at 35-37 Knowlton Street was sold in May 2023. On February 3, 2024, the new homeowner responded to GEI's request for access to the Property to perform inspection and monitoring of the system. The property has been undergoing exterior and interior renovations under the new homeowner. During the renovations (date unknown), while replacing the siding of the house, the radio node for the telemetry system was removed. GEI has continued to verify that the system fan is still running. GEI performed an EPMM inspection in November 2024. The EPMM inspection form is in Appendix J. Replacement of the radio node is planned.

6.3.2. EPMM Shutdown

At the request of the property owners at 9 Knowlton Street and 13 Knowlton Street, GEI is evaluating if the operation of the Option 1 EPMMs are required to maintain a condition of NSR.

6.3.2.1. AEPMM Closure Testing at 9 Knowlton Street

On May 11, 2022, a shutdown valve was installed on the SSDS riser pipe at 9 Knowlton Street. To simulate conditions without operation of the AEPMM, the SSDS fan was turned off and the shutdown valve was closed, for six weeks, prior to collecting soil vapor and indoor air samples in June 2022. The SSDS fan was turned off and the shutdown valve was closed, for one week, prior to collecting additional rounds of soil vapor and indoor air samples in January and March 2023.

After the indoor air and soil vapor sampling was completed, the shutdown valve was opened, and GEI requested that the owner reactivate the fan. Based on the results of the Option 1 EPMM closure sampling, GEI will evaluate the need for an AEPMM to achieve a condition of NSR at 9 Knowlton Street based on a Method 3 Risk Characterization.

6.3.2.2. AEPMM Closure Testing at 13 Knowlton Street

On November 1, 2016, a shutdown valve was installed on the SSDS riser pipe at 13 Knowlton Street. To simulate conditions without operation of the AEPMM, the SSDS fan was turned off and the shutdown valve was closed, for one week, prior to collecting soil vapor and indoor air samples in December 2016, February 2018, March and November 2019, and January 2023.

After the indoor air and soil vapor sampling was completed, the shutdown valve was opened, and the fan was reactivated. Based on the results of the Option 1 EPMM closure sampling, GEI will evaluate the need for an AEPMM to achieve a condition of NSR at 9 Knowlton Street based on a Method 3 Risk Characterization.

6.3.3. Longest Allowable Duration of AEPMM Shutdown

An operating regime for residential AEPMMs was included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011, which included an OMM plan for the systems. In accordance with the MCP (310 CMR 40.1026[3][f]), and as presented in Status Report No. 7 and RMR No. 22, the following exposure durations were calculated for Option 1 EPMMs where pre-EPMM indoor air data were available:

- 13 Knowlton Street: 54 years
- 23 Tufts Street: 11 years
- 27 Tufts Street: 25 years
- 31-33 Knowlton Street: 31 years
- 35-37 Knowlton Street: 4 years

Several Option 1 EPMMs were installed based on sub-slab soil vapor results, and pre-EPMM indoor air data are not available (including 13 Morton Street, 18 Morton Street, 95 Franklin Street, 103 Washington Street, and 9 Knowlton Street). However, based on the proximity of the AEPMMs throughout the Site, the shutdown exposure durations calculated for the properties with pre-AEPMM indoor air data are likely representative of the AEPMM properties with no pre-AEPMM indoor air data. Therefore, the longest duration of shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR at these properties is likely between 4 and 54 years.

6.3.4. Efficiency and Effectiveness

For residential buildings, the primary goals for EPMM performance are the reduction of chlorinated VOC concentrations in indoor air to below residential TVs to the extent feasible, and if that is not feasible, to achieve a condition of NSR. For commercial buildings, the standard for successful EPMM performance is the reduction of chlorinated VOC concentrations in indoor air to that which constitutes a condition of NSR.

Through December 15, 2024, the results of post-EPMM installation indoor air sampling and monitoring indicate that each of the Option 1 EPMMs installed or activated at residential and commercial properties has achieved the remedial objectives.

6.3.5. System Maintenance and Modifications

In November 2024, GEI replaced the battery in the radio node at 95 Franklin Street, 31-33 Knowlton Street, 13 Morton Street, 23 Tufts Street, 13 Knowlton Street, and 13 Morton Street during EPMM inspections.

GEI has been evaluating the current telemetry system in consideration of the 2024 MCP amendments. The 2024 amendments include continual monitoring of system vacuum. However, GEI understands that properties where telemetry systems are already registered with MassDEP will be grandfathered in (310 CMR 40.1026[3][d][6], effective March 1, 2024), are not required to report system vacuum.

If a property is to be closed with a Partial Permanent Solution with Conditions requiring an AUL, hardware changes at residences will be necessary, including replacing the radio node on the exterior of the house and replacing vacuum pressure switches with vacuum pressure transducers in the basement of each residence. These modifications will require GEI to access the interior of residences. Should this option be selected for closure in the future, GEI will coordinate with property owners at that time to perform the required system modifications.

6.3.6. *Management of Waste Materials*

No waste materials associated with Option 1 EPMMs were generated during the reporting period.

6.4. Option 2 and 3 EPMMs (Vapor Trench and/or New Slab)

Option 2 and 3 EPMMs consist of passive vapor mitigation and do not require mechanical operation or maintenance. Option 2 or 3 EPMMs have been installed at the following 9 properties:

- 95R Franklin Street (Option 2)
- 12 Morton Street (Option 3)
- 11 Morton Street (Option 2)
- 4 Morton Street (Option 3)
- 91-93 Franklin Street (Option 3)
- 17 Knowlton Street (Option 3)
- 32 Knowlton Street (Option 3)
- 19-19A Morton Street (Option 3)
- 166-168 Glen Street (Option 3)

In accordance with the MCP (310 CMR 40.1000) prior to the June 20, 2014 MCP amendments, regulatory closure was achieved with a Class A-3 Response Action Outcome Partial (RAO-P) Statement for several properties with an Option 2 or 3 EPMM. The properties that have achieved a Class A-3 RAO-P are presented in Fig. 6-3. In the amended MCP, the term “Response Action Outcome” has been replaced with “Permanent or Temporary Solution.” Subsequent regulatory closure for individual properties with Option 2 or 3 EPMMs will be achieved with Partial PSSs with Conditions. The condition associated with the PSSs with Conditions will be maintenance of the passive EPMM in accordance with an AUL.

6.4.1. *Operation and Monitoring*

To confirm the performance of an EPMM, indoor air samples were collected shortly after installation was completed. As identified in the Phase IV FIR/Phase V ROS for Option 2 and 3 EPMMs, following the initial post-installation indoor air sampling, indoor air samples were collected two times per year (including one winter sample) for two consecutive years. Samples were analyzed for Site-specific chlorinated VOCs.

Following the completion of post-installation indoor air sampling, annual inspection is conducted including inspecting system components. If needed, repairs or modifications are scheduled.

A summary of OMM activities performed for Option 2 and 3 EPMMs during this reporting period is in Table 6-2. During this reporting period GEI conducted EPMM inspections at: 91-93 Franklin Street, 17 Knowlton Street, 32 Knowlton Street, 166-168 Glen Street, 11 Morton Street, 12 Morton Street, and 19-19A Morton Street. GEI was unable to access 4 Morton Street and 95R Franklin Street during the reporting period. GEI will continue its attempts to obtain access for EPMM inspections at these properties during the next reporting period. EPMM Inspection Forms are in Appendix J.

6.4.2. Efficiency and Effectiveness

For residential buildings, the primary goals for EPMM performance are the reduction of chlorinated VOC concentrations in indoor air to below residential TVs to the extent feasible, and if that is not feasible to achieve a condition of NSR. For commercial buildings, the standard for successful EPMM performance is the reduction of chlorinated VOC concentrations in indoor air to that which constitutes a condition of NSR.

Through December 15, 2024, the results of post-EPMM installation indoor air sampling indicate that the Option 2 or 3 EPMMs currently installed at residential properties have achieved the remedial objectives.

6.4.3. System Maintenance and Modifications

No modifications were made to systems during the reporting period.

6.4.4. Management of Waste Materials

No waste materials associated with Option 2 or 3 EPMMs were generated during the reporting period.

6.5. Option 4 EPMMs (Passive Vapor Mitigation in New Construction)

Option 4 EPMMs consist of passive vapor mitigation installed in renovation or new construction and do not require mechanical operation or maintenance. Option 4 EPMMs have been installed at the following properties:

- 10 Morton Street (previously Option 3)
- 163 Glen Street (demonstrated to be not required)
- 34 Knowlton Street (previously listed under Option 3)
- 31 Tufts Street
- 121 Washington Street (in progress)

An EPMM was installed at 163 Glen Street when the former American Legion Post building was redeveloped as multifamily housing. It was demonstrated that the EPMM was not required based on sub slab soil gas sampling results that were below residential SSGSV.

Regulatory closure for individual properties with Option 4 EPMMs will be achieved with Partial PSSs with Conditions. The condition associated with the PSSs with Conditions will be maintenance of the passive EPMM in accordance with an AUL.

6.5.1. Operation and Monitoring

To confirm the performance of an EPMM, indoor air samples are collected shortly after installation is complete. Option 4 EPMMs have been conducted as RAMs, and post-installation indoor air sampling for newly installed Option 4 EPMMs to demonstrate effectiveness has been conducted in accordance with MassDEP 2016 VI Guidance:

- If groundwater concentrations are less than two times the Method 1 GW-2 standard, and sub-slab soil gas concentrations are less than two times soil gas screening values, and indoor air concentrations are less than two times threshold values (TVs), GEI performs 2 rounds of indoor air sampling, with one round occurring during the heating season.
- If groundwater concentrations are greater than two times the Method 1 GW-2 standard, and/or sub-slab soil gas concentrations are greater than two times soil gas screening values, and/or indoor air concentrations are greater than two times TVs, GEI performs quarterly indoor air sampling, with two rounds occurring during the heating season.

Additional indoor air sampling beyond the first year may be performed based on property-specific conditions. Samples will be analyzed for Site-specific chlorinated VOCs. During indoor air sampling, the condition of the EPMM will be inspected and, if needed, repairs or modifications will be scheduled.

Following the completion of post-installation indoor air sampling, annual inspection includes inspecting system components. If needed, repairs or modifications will be scheduled.

A summary of OMM activities performed for Option 4 EPMMs during this reporting period is presented in Table 6-2. GEI conducted indoor air testing at 31 Tufts Street in September 2024. GEI performed EPMM inspections at 34 Knowlton Street, 10 Morton Street, and 31 Tufts Street during this reporting period. As discussed below in Section 6.5.1.1., the EPMM at 10 Morton Street was previously an Option 3 EPMM but was removed for construction in 2023; the new Option 4 EPMM was completed during this reporting period, so the EPMM inspection was performed. EPMM Inspection Forms are in Appendix J.

6.5.1.1. 10 Morton Street Renovation

GEI was made aware of a property sale for 10 Morton Street on February 14, 2023, through contact with the new homeowner. The new homeowners indicated that they had plans to renovate the basement of the home. To evaluate the need for the continued presence of the EPMM installed beneath the slab, four soil vapor points were installed and sampled in March and April 2023.

On June 21, 2023, GEI submitted a RAM Plan to address contemplated changes to activities and uses of the Property as they relate to the previously-installed EPMM. Based on historical (2007 and 2008) and recent (2023) sub-slab soil gas sampling, an updated Unit Risk Factor for PCE (2008) and the “WSC No. 16-435: Vapor Intrusion Guidance,” dated October 2016 (2016 VI Guidance), GEI concluded in the RAM Plan that the EPMM was no longer required to maintain a condition of NSR and could be demolished. However, in response to comments subsequently received from MassDEP, a RAM Plan Modification was submitted on November 8, 2023 to provide for a sub-slab venting system and 20 mil vapor barrier to be installed during renovations and for post installation sub-slab soil gas and indoor air testing to be conducted to evaluate whether an EPMM and an AUL are required to maintain a condition of NSR.

In April 2024, GEI installed two new sub-slab monitoring points, SV5 and SV6, using Vapor Pin® sampling devices once basement underpinning activities were complete. The previous Status Report stated that four monitoring points were installed; however, only two points were successfully installed. The installation logs were also not included in the previous Status Report and are now included in Appendix F.

GEI submitted RAM Status Report No. 3 in October 2024. The EPMM installation was completed in September 2024 when A-Zoulas Environmental Enterprises (A-Zoulas) of Hudson, New Hampshire extended the sub-slab vapor mitigation system exhaust riser piping to above the roof. As discussed in Section 4.3, GEI collected confirmatory sub-slab soil vapor samples on October 9, 2024. Confirmatory indoor air samples will also be collected.

6.5.1.2. 31 Tufts Street

The property at 31 Tufts Street, formerly a paved parking lot, has been redeveloped as multi-family housing. 31 Tufts Street LLC and Tufts Glen Pocket Park LLC currently are joint owners of the property. E3 Development, Inc. is the Manager and designated developer. E3 Development has constructed a three-story residential apartment building and public open space. MassDEP assigned RTN 3-37468 to the 31 Tufts Street property based on concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals exceeding the applicable MassDEP reportable concentrations in soil (RCS-1) standards. These conditions are not attributable to the 50 Tufts Street Site.

On July 25, 2022, GEI submitted a RAM Plan on behalf of the owner for response actions in connection with construction, including soil management and installation of a vapor barrier and a sub-slab ventilation piping network beneath the building. In September 2022, GEI observed the installation of a vapor barrier and a sub-slab ventilation piping network beneath the building. In October 2022, GEI observed a smoke test to confirm barrier integrity. On December 5, 2023, GEI submitted a RAM Completion Report and Permanent Solution Statement for RTN 3-37468.

GEI has conducted three rounds of sub-slab soil vapor and indoor air sampling as discussed in Section 4. The concentration of VOCs in the sub-slab soil gas samples are below the applicable residential SSGSV. The concentrations of PCE, detected in three of the indoor air samples ($0.604 \mu\text{g}/\text{m}^3$, $0.210 \mu\text{g}/\text{m}^3$, and $0.142 \mu\text{g}/\text{m}^3$) collected on September 6, 2024, are less than the residential TVs.

We will continue coordinating with the owner of the property to perform additional sub-slab soil vapor and indoor air testing with the venting closed in winter 2025.

6.5.2. Efficiency and Effectiveness

For residential buildings, the primary goals for EPMM performance are the reduction of chlorinated VOC concentrations in indoor air to below laboratory reporting limits to the extent feasible, and to achieve a condition of NSR. For commercial buildings, the standard for successful EPMM performance is the reduction of chlorinated VOC concentrations in indoor air to that which constitutes a condition of NSR.

Through December 15, 2024, the results of post-EPMM installation indoor air sampling indicate that the Option 4 EPMMs currently installed at residential properties have achieved the remedial objectives.

6.5.3. *System Maintenance and Modifications*

Construction and installation of the EPMM at 121 Washington Street is ongoing.

6.5.3.1. 121 Washington Street

The property at 121 Washington Street is being redeveloped into residential apartment units. A small commercial building and paved parking formerly occupied property. The building was demolished in October 2020. As of December 2024, most of the building envelope is complete. GEI submitted a RAM Plan on behalf of the owner (Wooden Teeth, LLC) on March 12, 2024. The RAM consists of the installation of installation of a vapor barrier and a sub-slab ventilation piping network beneath the building.

On February 29, 2024, GEI observed the installation of perforated 4-inch pipe; the pipe was installed instead of the low-profile vent strips which had been specified in the original design. The perforated 4-inch pipe was installed embedded in a layer of crushed stone. GEI returned on March 25, 2024, to observe additional areas where the perforated 4-inch pipe was installed. The vent piping was installed by the developer's plumbing contractor.

A portion of the vapor barrier was installed on April 18, 2024, and the remainder was placed by September 2024. The vapor barrier was placed over the crushed stone and sealed double-sided tape and Stegomastic. On September 18, 2024, A-Zoulis conducted a smoke test of the newly installed vapor barrier. Where smoke penetrated the vapor barrier, A-Zoulis made repairs using double-sided tape and Stegomastic. The EPMM was complete by December 2024 when the system exhaust riser piping had extended to the roof of the building. GEI submitted a RAM Status Report in January 2024.

6.5.4. *Management of Waste Materials*

No waste materials associated with Option 4 EPMMs were generated during the reporting period.

6.6. Activity and Use Limitations

It is anticipated that AULs may be warranted for each property where an EPMM is installed, and it is determined that the EPMM is necessary long-term. No AULs were recorded during this reporting period.

6.7. Permanent Solution Statements

GEI evaluates the groundwater chemical testing results collected during MNA activities to update and supplement the plume stability monitoring and natural attenuation evaluation, as presented in the Phase II CSA / Phase III RAP report. An evaluation of the MNA program indicates that the groundwater plume is stable, groundwater concentrations are decreasing in portions of the plume, and natural attenuation processes are occurring at the Site which will likely reduce contaminant concentrations in groundwater over time. Previous investigations have also demonstrated that soil vapor plumes are stable. Visible NAPL has not been observed at the Site, and any DNAPL that may be present is not migrating and exists in a stable configuration. The Phase III demonstrated that it is not feasible to eliminate DNAPL at the Site. There are no unpermitted releases of OHM at the Site. Accordingly, all sources of OHM at the Site have been eliminated or controlled to the extent feasible.

The Updated 2015 Method 3 Risk Characterization that ARCADIS prepared was presented in Phase V Status Report No. 8 and RMR No. 23. The Updated 2015 Method 3 Risk Characterization incorporated updated soil, groundwater, and indoor air data sets, and included updated MassDEP toxicity information, particularly for PCE and TCE. GEI also routinely performs Method 3 risk screening for additional indoor air data collected since 2015. Based on these risk evaluations, a condition of NSR exists for current and future building occupants at each property within the Site. Based on the Updated 2015 Method 3 Risk Characterization, a condition of NSR does not exist for future construction workers performing excavations at the Property or within the MBTA ROW. The inhalation of excavation air pathway associated with the MassDEP change in TCE toxicity is the main driver of potential risks for construction workers in both exposure areas. However, these construction worker risks can and should be managed with a Health and Safety Plan (HASP) that is prepared and implemented prior to subsurface work in these exposure areas.

Based on a demonstration of source control at the Site, and a condition of NSR at individual properties, many of the individual properties are eligible for a Partial PSS in accordance with the MCP (310 CMR 40.1000). The filing of a Partial PSS for an individual property documents the achievement of regulatory closure under the MCP for that property. Therefore, the Phase V provisions do not apply to properties for which an RAO-P or Partial PSS has been submitted.

The properties that have achieved a Partial PSS are shown on Fig. 6-3. A summary of the different classes of Partial PSSs to be submitted in the future for properties at the Site, depending on the property-specific conditions and the type of mitigation, if any, are discussed below. No new Partial PSS were prepared during the reporting period.

6.7.1. *Permanent Solution without Conditions*

GEI will prepare a Partial PSS without Conditions for residences where multiple lines of evidence have demonstrated the absence of a soil vapor migration pathway to indoor air and an EPMM is not required. GEI will also prepare Partial PSSs for residences where a Method 3 Risk Characterization, based on multiple rounds of sampling, indicated that concentrations of chlorinated VOCs in indoor air constitute NSR, and the feasibility evaluation demonstrated that installation of an EPMM was infeasible. In addition, GEI will prepare a Partial PSS without Conditions for the portion of the Site occupied by public rights-of-way. The properties that have achieved a Partial PSS without Conditions are shown in Fig. 6-3.

6.7.2. *Permanent Solution with Conditions*

Active operation and maintenance is required for Option 1 EPMMs. Based on the MCP amendments effective June 20, 2014, a PSS with Conditions can be achieved for properties with an Option 1 EPMM. The condition associated with the PSSs with Conditions would be maintenance of the EPMM in accordance with an AUL.

GEI will attempt to record an AUL at each property with an Option 1, 2, 3 or 4 EPMM to maintain the integrity of the EPMM. No new AULs were recorded during the reporting period. After an AUL is recorded, GEI will prepare a Partial PSS with Conditions for residential properties with Option 1, 2 or Option 3 EPMMs where 2 years of post-installation indoor air samples have demonstrated that the EPMM is effective. Following the post-installation indoor air sampling, GEI will continue annual

inspections of Option 1, 2, 3 and 4 EPMMs as provided for in the Phase IV RIP. The properties that have achieved a Partial PSS with Conditions are shown in Fig. 6-3. If a property owner does not execute an AUL, inspections will continue as Phase V activities.

6.8. Future Phase V Activities

6.8.1. EPMM Operation and Monitoring

The results of post-EPMM installation indoor air sampling indicate that the Option 1, 2, 3 and 4 EPMMs installed at the Site have achieved the remedial objectives.

GEI will continue to conduct annual OMM activities for installed EPMMs where sufficient indoor air sampling has been conducted, but not repeat indoor air testing, to confirm it is achieving the remedial design objectives.

GEI has been communicating with property developers for 31 Tufts Street and 121 Washington Street. An EPMM has been installed at 31 Tufts Street and an EPMM is in the process of being installed at 121 Washington Street. GEI will plan with the property owners to continue the operation and monitoring program outlined in Section 6.5.

6.8.2. EPMM Modifications

As discussed in Section 6.1, the properties at 103 Washington Street and 105 Washington Street are mixed-use redevelopments with commercial space and open-air parking on the first floor and residential units above. The pre-existing buildings at both properties have been demolished and the AEPMM previously at 103 Washington Street was removed.

As discussed in Section 6.3, remote telemetry has been installed at each Option 1 EPMM except for 9 Knowlton Street. The owner of 9 Knowlton Street has been unresponsive to telemetry access request letters, telephone calls, and property visits. Therefore, it is currently infeasible to install telemetry at the property.

As discussed in Section 6.5, 10 Morton Street is being renovated and installation of the new EPMM in the modification was completed during this reporting period.

6.8.3. EPMM Closure Sampling

As discussed in Section 6.3.2, GEI collected indoor air samples from 13 Knowlton Street in February 2018, March 2019, November 2019, and January 2023 and from 9 Knowlton Street in June 2022, January 2023, and March 2023 to demonstrate that the Option 1 EPMM is not required to maintain a condition of NSR.

Based on the results of the Option 1 EPMM closure sampling, GEI will continue to evaluate the need for an AEPMM to achieve a condition of NSR at 9 Knowlton and 13 Knowlton Street.

6.8.4. Installation of New EPMMs

During this reporting period, the EPMM at the 121 Washington Street development continued installation, as discussed in Section 6.5.3.

6.8.5. AULs and Permanent Solutions

As discussed in Section 6.7., the source of contamination at the Site has been controlled. If post-installation indoor air sampling at a property demonstrates that an EPMM continues to achieve the remedial objectives, then that property is eligible for a Partial PSS with Conditions.

GEI anticipates recording AULs for each property where an EPMM is installed, and a Partial PSS with Conditions is to be issued.

Once the AULs are recorded, GEI will prepare a Partial PSS with Conditions for the properties with EPMMs. As discussed in Section 6.7, GEI will prepare Partial PSSs for those properties that did not require mitigation.

6.8.6. Future Residential Monitoring

As discussed in Section 1.4., GEI continues to attempt to contact new property owners in the Tufts Street neighborhood as property ownership turnover occurs. To that effect, GEI has pursued contact with the new owner of 84 Franklin Street to conduct indoor air and sub-slab soil vapor monitoring at the property during the heating season of winter 2025. As discussed in Sections 4.3 and 4.4, GEI collected indoor air and sub-slab soil vapor sampling at 97 Franklin Street in May 2024; GEI will conduct an additional round of indoor air sampling and install new sub-slab soil vapor monitoring points in the heating season of winter 2025. These efforts are documented in Appendix B.

7. 60 Tufts Street

7.1. Background

60 Tufts Street is a 17-unit condominium building adjacent to the Property. The mitigation system at 60 Tufts Street was designed and constructed as an SSDS. The SSDS includes 12 vertical sub-slab extraction points and 2 horizontal foundation wall extraction points connected to 2 collection headers and a 5-horsepower regenerative blower with pressure gauges, controls, and particulate filter housed in a locked metal enclosure. GEI began operation of the SSDS on April 24, 2009. A discharge pipe extends from the blower through a parking garage deck and discharges above the roofline of the building.

On July 24, 2015, remote telemetry was installed at 60 Tufts Street. The remote telemetry consists of one radio node and one pressure switch connected to the blower to send notification of a system shut down remotely to the wireless remote monitoring hub located at the Property.

The system does not include off-gas treatment. Based upon the measured flow rate and VOC concentrations, the annual discharge rate of VOCs from the system will be significantly less than 100 lbs per year; therefore, no off-gas treatment is required per MassDEP Policy No. WSC-94-150.

7.2. Remedial Objectives

The objectives of the SSDS at 60 Tufts Street are to:

- Eliminate or mitigate, to the extent feasible, the potential soil vapor migration pathway to indoor air.
- Achieve a condition of NSR for occupants of the condominium building.

7.3. Inspection and Monitoring

The system has been monitored in accordance with the requirements and schedule in the Phase IV RIP, and in accordance with the requirements and schedule presented in subsequent Phase IV Status Reports, and the Phase IV FIR/Phase V ROS.

Operational parameters for the system (e.g., flow rate, vacuum) were historically monitored monthly and indoor air quality in Units 1, 4, and 5 and sub-slab conditions were monitored for 2 years following installation of the EPMM. The Phase IV RIP provided for ongoing annual indoor air sampling. However, post-EPMM indoor air sampling and visual inspections confirmed that the EPMM at 60 Tufts Street has been constructed in accordance with the Phase IV RIP and has achieved the remedial design objectives. Accordingly, GEI no longer conducts annual indoor air testing but has continued to monitor operational parameters of the system.

Once remote telemetry was installed on the system on July 24, 2015, GEI began to perform monitoring of system parameters on a quarterly basis in July 2015. Inspection and monitoring at 60 Tufts Street was performed two times from June to December 2024. A summary of monitoring activities conducted during this reporting period is provided in Table 7-1 and the Field Monitoring Forms are provided in Appendix I.

7.4. Performance Efficiency and Effectiveness

As presented in the Phase IV RIP and Phase IV FIR/Phase V ROS reports, the SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS influences nearly the entire floor slab area. Indoor air samples were collected in Units 1, 4, and 5, which are the units closest to the ground floor, for 2 years after EPMM installation. The indoor air testing results indicated that a condition of NSR has been achieved for building occupants at 60 Tufts Street and the soil vapor migration pathway to indoor air has been mitigated to the extent feasible.

7.4.1. AEPMM Closure Testing

On March 20, 2018, a shutdown valve was installed on the SSDS riser pipe at 60 Tufts Street. To simulate conditions without operation of the AEPMM, the SSDS fan was turned off and the shutdown valve was closed for one week beginning on April 17, 2019, prior to collecting soil vapor and indoor air samples. After the indoor air sampling was completed, the shutdown valve was opened, and the blower was reactivated. The results of the indoor air and soil vapor sampling were presented in Phase V Status Report #16.

7.5. Management of Waste Materials

Infrequently, condensate in system piping may accumulate in the cleanout drains for the sub-surface header pipes, or in the moisture separator installed as part of the blower assembly. If observed, the liquid will be drained and dispensed to the bare ground surface at 60 Tufts Street so that it can infiltrate into the subsurface within the Site boundary.

7.6. System Modifications

No system modifications were made during the monitoring period.

7.7. Future Phase V Activities

The system is achieving the remedial design objectives and OMM activities will continue. To confirm system performance, GEI will continue to monitor operational parameters and sub-slab conditions (e.g., flow rate, vacuum) on a quarterly basis. During monitoring events, GEI will also perform maintenance tasks as needed, which may include documenting that the blower is in operation, draining accumulated water from the moisture separator or collection headers, changing the filter element for the blower, changing the batteries in the auto-dialer, and correcting any issues observed during routine inspection of system components. GEI will implement any modifications to the telemetry system that may be required.

7.7.1. EPMM Closure Sampling

Based on pre-EPMM indoor air testing at 60 Tufts Street, and changes to the toxicological characteristics for PCE, the EPMM may not be required to maintain a condition of NSR. GEI has communicated with the owners and occupants of 60 Tufts Street, who are amenable to EPMM closure indoor air testing.

In accordance with MassDEP's 2016 VI Guidance, GEI initiated a closure indoor air testing program at 60 Tufts Street during spring 2018, which is:

- Installing a shutdown valve on March 20, 2018 on the ventilation piping of the EPMM.
- Performing indoor air sampling at 60 Tufts Street in July 2018 and April 2019.
- Shutting down the SSDS fan for 7 days prior to indoor air sampling.
- Keeping the shutdown valve closed for 7 days prior to sampling to effectively prevent venting, and
- Following each sampling event, returning the system to normal operating conditions.

Testing was suspended during the COVID-19 pandemic. The unit that GEI had been testing (Unit #4) was sold, the condominium property management company changed, and GEI has not been able to contact the new owner.

7.7.2. Longest Allowable Duration of AEPMM Shutdown

An operating regime for the 60 Tufts Street AEPMM was included in the Phase IV FIR/Phase V ROS submitted on August 4, 2011, which included an OMM plan for the system. In accordance with the MCP (310 CMR 40.1026[3][f]), and as presented in Status Report No. 7 and RMR No. 22, the longest duration of a shutdown that would be consistent with a level of exposure that does not pose an IH and that poses NSR is 52 years for the 60 Tufts Street property.

7.7.3. Regulatory Closure

As discussed previously in Section 6.7, a Permanent Solution with Conditions can be achieved for properties where an AEPMM has achieved the remedial objectives, an AUL has been recorded for the property, and telemetry is installed. A Partial Permanent Solution Statement with Conditions may be submitted to achieve regulatory closure for 60 Tufts Street if the condominium association for the property executes an AUL. If the last round of shutdown testing demonstrates that an AEPMM no longer is required to maintain a condition of NSR, then a Partial Permanent Solution may be achievable without an AUL.

8. 50 Tufts Street Property

8.1. Background

The remedial system at the Property was originally designed and constructed as an SSDS that includes 22 sub-slab extraction points inside the building, a 15-horsepower regenerative blower with pressure gauges, controls, and particulate filter, and three 2,000-lb activated carbon absorbers operated in series for off-gas treatment. As part of the SSDS installation, the building slab was sealed to minimize vapor transmission through the slab. The cracks and joints in the building slab were filled with flexible sealant and a two-part epoxy coating was applied to the surface of the slab. GEI began operating the SSDS on April 30, 2007.

In July and August 2007, SVE components were added to the system as part of the CRA to address residual VOCs in soil. The SVE system includes seven SVE points installed below the pavement in the north and south parking lots on the Property. The SSDS and the SVE system rely upon shared equipment, including the piping manifold, blower assembly, and off-gas treatment units. GEI began operating the SVE system on August 22, 2007.

In April 2015, a wireless telemetry hub was installed at the Property. The telemetry hub receives telemetry notification from the other AEPMMs at the Site. A radio node was also installed and connected to monitor the 50 Tufts Street system.

8.2. Remedial Objectives

The design objectives of the combined SSDS/SVE system were to:

- Eliminate or mitigate, to the extent feasible, the soil vapor migration pathway to indoor air.
- Achieve a condition of NSR for a commercial full-time worker.
- Reduce the mass of contaminants in the vadose zone.
- Control the potential migration of soil vapor from the Property to the 60 Tufts Street property.

8.3. Inspection and Monitoring

The system has been monitored in accordance with the requirements and schedule in the Phase IV RIP. Monitoring of the system was historically performed monthly; however, once telemetry was installed on the system, GEI began performing quarterly monitoring in July 2015. Operational parameters for the system (e.g., flow rate, vacuum, off-gas treatment efficiency) were monitored seven times from June to December 2024. GEI also measures the vapor pressure of sub-slab extraction points and monitoring points periodically. GEI uses these sub-slab pressure measurements to confirm system effectiveness. The pipe and hose connections on the pressure side of the blower are examined during monitoring visits for potential leaks. Leaks, if encountered, are corrected immediately. Carbon change-outs are scheduled based on carbon tank monitoring data to maximize VOC adsorption while maintaining compliance with regulatory requirements regarding discharge of VOCs to the atmosphere.

Procedures to address potential spills of spent activated carbon during carbon change-outs have been developed and are presented in the system OMM Plan provided in the Phase IV RIP.

GEI performs monitoring for off-gas treatment efficiency monthly. Based on that monitoring, the system off-gas for the combined SSDS/SVE system was within permissible limits during the reporting period. A summary of monitoring activities during this reporting period is provided in Table 8-1, and Field Monitoring Forms are provided in Appendix I.

8.4. Performance Efficiency and Effectiveness

The SSDS monitoring data show that the sub-slab vacuum field generated by the SSDS covers most of the building slab area. In conjunction with the physical sealing of the slab, this indicates the soil vapor migration pathway to indoor air is being mitigated by the system. Based on indoor air testing results collected since the combined system has been in operation, and the Method 3 risk characterizations prepared for the Site, a condition of NSR for full-time commercial workers has been achieved for the building at the Property.

The SVE system monitoring data show that vacuum influence from the SVE points in the south parking lot extends approximately 30 feet south of the building and from the SVE points in the north parking lot extends onto 60 Tufts Street.

Three influent and two effluent samples from the carbon treatment system were collected in May 2007, June 2007, and March 2008. The results of this sampling were compared with PID field measurements to estimate the total mass of VOCs removed from soil vapor between April 2007 and May 2014. However, GEI collected more recent influent and effluent samples in February 2014. The results of the February 2014 influent and effluent sampling are a better indicator of current system conditions and were used to estimate the total mass of VOCs removed from soil vapor based on PID field measurements beginning in June 2014. Monitoring data from both the SSDS and SVE components through December 15, 2024, show that approximately 9,494 lbs (approximately 705 gallons) of VOCs have been removed from the vadose zone at the Property (Fig. 8-1).

8.5. Management of Waste Materials

Infrequently, condensate in system piping may accumulate in the moisture separator installed as part of the blower assembly. If observed, the liquid is drained from the moisture separator and dispensed to the bare ground surface at the Property so that it can infiltrate into the subsurface within the Site boundary.

Based on the previous quantities of spent carbon generated by the system, a 2023 Hazardous Waste Report was submitted to MassDEP on March 7, 2024, identifying the Property as a Large Quantity Generator (LQG) facility. GEI will submit the next biennial Hazardous Waste Report in early 2026.

No remediation waste was generated during this reporting period.

8.6. System Modifications

A crack in the extraction piping was observed and repaired by GEI in the 50 Tufts Street building in July 2024.

8.7. Future Phase V Activities

The system is achieving the remedial design objectives. Phase V ROS OMM activities will continue in accordance with the requirements and schedule set forth in the Phase IV RIP.

8.7.1. Longest Duration of AEPMM Shutdown

An operating regime for the 50 Tufts Street AEPMMs was included in the Phase IV FIR/ Phase V ROS submitted on August 4, 2011, which included an OMM plan for the system. Indoor air sampling performed at 50 Tufts Street by GeoInsight in September 2006 identified PCE concentrations ranging from 550 to 800 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), and TCE concentrations ranging from 16 to 150 $\mu\text{g}/\text{m}^3$. In accordance with the MassDEP Fact Sheet “TCE Toxicity Information: Implications for Chronic and Shorter-Term Exposure,” dated March 27, 2014, the pre-EPMM concentrations in the building would pose an IH even over a short time period, such as a matter of days. However, GEI performed indoor air sampling during an unscheduled SSDS/SVE system shutdown in March 2015. The March 2015 indoor air concentrations did not pose an IH, and TCE was not detected during the March 2015 indoor air sampling. Based on system monitoring logs, the system was likely down for slightly less than 1 month during the March 2015 shut down. This information indicates that an IH would not be present during a minor shut down of the 50 Tufts Street system. Because the building is currently occupied, sampling cannot be conducted after the system has been shut down for a full 60 days or longer, so the maximum duration for a system shutdown that might pose an IH is not known now.

GEI will continue to operate the AEPMM at 50 Tufts Street.

9. Monitored Natural Attenuation

9.1. MNA Program Objectives

MNA is part of the remedial strategy to reach a Permanent Solution for the Site. GEI has implemented an MNA program to confirm on-going natural attenuation is occurring at the Site. The MNA program is described in the MNA OMM Plan presented in the Phase IV RIP. The primary elements of the MNA program include:

- **Plume Stability Monitoring:** A groundwater sampling plan to monitor overburden and bedrock groundwater plume concentrations through time to confirm that the groundwater plumes are stable, and that overall groundwater concentrations of chlorinated VOCs are not increasing.
- **Natural Attenuation Evaluation:** An evaluation of overburden and bedrock groundwater plume concentrations through time for indications of the presence and rate of natural attenuation processes.

9.2. MNA Activities

GEI conducted the following MNA activities during the reporting period:

- **Groundwater Level Measurements:** GEI measured groundwater levels at monitoring wells shown in Table 9-1.
- **Groundwater Sampling:** GEI collected groundwater samples from one monitoring well in September 2024 and five monitoring wells in November 2024. Samples were submitted for chemical testing for VOCs by EPA Method 8260B. The sampling locations are shown in Fig. 4-1, the chemical testing results are shown in Table 4-2, and the laboratory data reports are in Appendix E.

GEI evaluated the groundwater chemical testing results collected during MNA activities to update and supplement the plume stability monitoring and natural attenuation evaluation, as presented in the Phase II CSA / Phase III RAP report.

Based on an analysis of the Mann-Kendall statistical trend test results, which incorporates the additional groundwater testing data, the PCE, TCE, and TCA groundwater plumes continue to be stable. GEI has been conducting the Mann-Kendall analysis on 38 wells for 3 analytes, PCE, TCE, and TCA, which represents 114 data sets. The Mann-Kendall analysis shows that 94% of the data sets are either stable or decreasing, of which more than 40% of these data sets are decreasing. This is a very strong demonstration of plume stability. It also demonstrates that if the dissolution of contaminants into groundwater from DNAPL is occurring, it is not preventing plume stability.

GEI has been monitoring concentration fluctuations in groundwater PCE concentrations in monitoring wells MW122 and MW112A, and TCE concentrations in monitoring wells MW118D and MW121D. The concentrations increased in MW121D and were consistent in MW118D. The concentrations increased slightly in MW112A.

The Mann-Kendall statistical analysis indicates that over a ten-year period MW122 is increasing for PCE and TCA; however, over the last five years concentrations of PCE, TCA, and TCE are stable. Additionally, downgradient overburden monitoring wells MW118S and MW121S remain non-detect for PCE and TCE, which indicate that the plume remains stable despite increased concentrations at MW122. GEI will perform additional groundwater sampling of these monitoring wells in spring 2025.

GEI will investigate potential utilities in Franklin Street that may be contributing to a preferential pathway for contaminant migration. MW122 is adjacent to 97 Franklin Street. While historical soil vapor and indoor air monitoring at the property did not warrant the installation of an EPMM, GEI has initiated soil gas and indoor air sampling as discussed in Section 4.3 and 4.4.

As discussed in Section 4.1, groundwater monitoring well MW104R was intended to be a replacement well for MW104 which was destroyed by the MBTA. Concentrations of PCE in MW104R are greater than historical concentrations in destroyed MW104, however, concentrations of TCE are similar. Concentrations of PCE from September and November 2024 samples (510 µg/L and 620 µg/L, respectively) were also lower than in April 2024 (2200 µg/L).

The concentrations in MW104R are higher than in MW104 and do not likely represent the same data set because:

- the groundwater samples are collected from a deeper interval;
- MW104R is located further south than the former MW104; and
- MBTA construction activities—dewatering between 2019 and 2020 and installation of the perforated distribution line—have permanently relocated the plume center of mass southward.

10. Tufts Street Reconstruction

In July 2023, the City of Somerville announced the Tufts Street Reconstruction project. GEI attended community meetings and community communication events in August and October 2023. At the time, the scope of the project included the reconstruction/ widening of sidewalks, replacement of select catch basins, realignment of Tufts Street, and repaving the road surface. GEI additionally attended a meeting with the City and their LSP (Atlas Environmental and Infrastructure) to discuss historical contamination at the 50 Tufts Street property. The planned construction schedule was originally during the summer and fall of 2024.

On February 29, 2024, the City of Somerville announced that based on community feedback the scope of the project would expand to include the addition of planting trees and greenery. The City of Somerville stated that this would require deeper excavations and that due to the historical contamination originating at 50 Tufts Street additional shallow soil analysis was planned. The City of Somerville announced that the construction schedule has been updated to 2025 and 2026. GEI understands that the project will be conducted under a Utility Release Abatement Measure Plan which will include a Soil and Groundwater Management Plan. The Tufts Street Reconstruction project website with updated communication and concept plans is:

<https://voice.somervillema.gov/tufts-street-reconstruction?preview=true>.

10.1. City of Somerville Subsurface Investigation

Based on communication with the City of Somerville and their LSP, GEI understands that a subsurface investigation consisting of eight soil borings was conducted in March 2024. Prior to the investigation, GEI observed the boring locations marked for DigSafe. Additionally, we understand that soil samples were collected from the borings for analysis of waste disposal parameters. The City of Somerville data is not publicly available although we expect the data to be included in the construction documents that will be put out to public bid in the Spring of 2025.

10.2. 50 Tufts Street Soil Borings and Soil Samplings

Based on discussions with UniFirst, on February 12, 2024, GEI observed Northern advance five soil borings (50TUFT-B101 through 50TUFT-B105) on the 50 Tufts Street property adjacent to the property boundary with the City of Somerville sidewalk (Fig 10-1). The purpose of the soil sampling was to evaluate concentrations of chlorinated VOCs on the 50 Tufts Street property near the proposed work area for the Tufts Street Reconstruction project. Borings 50TUFT-B101 and 501TUFT-B102 were advanced in the northern parking lot and borings 50TUFT-B103 through 50TUFT-B105 were advanced in the southern parking lot. Borings were advanced to a depth of five feet and samples were collected for analysis of VOCs.

Boring logs and Laboratory Data Reports were included in the Phase V Status Report No. 26 and RMR No. 41.

11. Remedial Monitoring Report No. 42

Remedial Monitoring Report No. 42, documenting OMM activities for active remedial systems at the Site, is presented in the BWSC-108A and 108B Transmittal Forms in Appendix A.

12. References

MassDEP (1994). "Off-gas Treatment of Point-Source Remedial Air Emissions," Massachusetts Department of Environmental Protection, Policy #WSC-94-150, dated 1994.

MassDEP (2016). "Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure, Policy # WSC-16-435", dated October 14, 2016.

MassDEP (2024). The Massachusetts Contingency Plan (MCP), 310 CMR 40.0000. March 1, 2024.

GEI (2015). Phase V Status Report No. 8 and Remedial Monitoring Report No. 23, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 3, 2015.

GEI (2022). Release Abatement Measure Plan, 31 Tufts Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246 and 3-37468, dated July 25, 2022.

GEI (2023). Release Abatement Measure Status Report No. 1, 31 Tufts Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246 and 3-37468, dated January 11, 2023.

GEI (2023). Release Abatement Measure Status Report No. 2, 31 Tufts Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246 and 3-37468, dated May 22, 2023.

GEI (2023). Release Abatement Measure Plan, 10 Morton Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246, dated June 21, 2023.

GEI (2023). Release Abatement Measure Plan Modification and Status Report No. 1, 10 Morton Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246, dated November 8, 2023.

GEI (2023). Release Abatement Measure Completion Report and Permanent Solution Statement, 31 Tufts Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246 and 3-37468, dated December 4, 2023.

GEI (2024). Release Abatement Measure Plan, 121 Washington Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246, dated March 12, 2024.

GEI (2024). Release Abatement Measure Status Report No. 2, 10 Morton Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246, dated May 2, 2024.

GEI (2024). Release Abatement Measure Status Report No. 1, 121 Washington Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246, dated July 20, 2024.

GEI (2024). Phase V Status Report No. 26 and Remedial Monitoring Report No. 41, 50 Tufts Street, Somerville, MA, RTN 3-23246, dated August 7, 2024.

GEI (2024). Release Abatement Measure Status Report No. 3, 10 Morton Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246, dated October 29, 2024.

GEI (2025). Release Abatement Measure Status Report No. 2, 121 Washington Street, a portion of 50 Tufts Street Disposal Site, Somerville, Massachusetts, RTNs 3-23246, dated January 20, 2025.

Kennedy/Jenks Consultants (2018). 120-Day Release Notification, 132 Washington Street, Somerville, MA, dated January 23, 2018.

TRC (2019). URAM Plan for Excavation and Dewatering, MBTA Green Line Extension, Somerville, MA, RTN 3-35528, dated April 2019.

TRC (2019). Release Abatement Measure Plan, 132 Washington Street, Somerville, MA, dated July 2019.

TRC (2019). Release Abatement Measure Modification and Status Report #7, MBTA Green Line Extension Project, Somerville Special Project Designation, Somerville, MA, RTN 3-30620, dated July 15, 2019.

TRC (2019). Utility-Related Abatement Measure Completion Report, MBTA Green Line Extension, Somerville, MA, RTN 3-35528, dated August 2019.

TRC (2024). Release Abatement Measure Completion Report, 132 Washington Street, Somerville, MA, dated May 7, 2024.

Weston & Sampson (2019). Downgradient Property Status Submittal, 132 Washington Street, Somerville, MA, RTN 3-34742, dated June 2019.

Tables

Table 2-1. GLX Excavated Material Summary (RTN 3-34742)
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

RAM Status Report	Date	Cubic Yards	Classification	Disposal Location	Comments		
Status Report No. 1	11/15/2019	11,678.22	Hazardous Waste	Heritage Environmental Services, Roachdale, IN	Stored off-site for > 90 days prior to disposal		
Status Report No. 2	5/15/2020	5,124	Hazardous Waste	Heritage Environmental Services, Roachdale, IN			
Status Report No. 3	11/10/2020	1,576 2,107 1,740	Hazardous Waste Non-Hazardous Non-Hazardous	Heritage Environmental Services, Roachdale, IN Lynn Landfill, Lynn, MA Allied Niagara Fall Landfill, Niagara Falls, NY			
Status Report No. 4	5/10/2021	960.16 408.46	Non-Hazardous Non-Hazardous	Lynn Landfill, Lynn, MA Allied Niagara Fall Landfill, Niagara Falls, NY			
Status Report No. 5	10/27/2021	4,387.18 362.50	Non-Hazardous Non-Hazardous	Lynn Landfill, Lynn, MA Allied Niagara Fall Landfill, Niagara Falls, NY			
Status Report No. 6	5/6/2022	170 21.49 742.24	Hazardous Waste Non-Hazardous Non-Hazardous	Heritage Environmental Services, Roachdale, IN Lynn Landfill, Lynn, MA Allied Niagara Fall Landfill, Niagara Falls, NY	Disposal documents not in RAM Status Report		
Status Report No. 7	10/6/2022	145.31 622.63 519.77	Hazardous Waste Non-Hazardous Non-Hazardous	Heritage Environmental Services, Roachdale, IN Lynn Landfill, Lynn, MA Allied Niagara Fall Landfill, Niagara Falls, NY			
Status Report No. 8	5/15/2023	84.53 17.95 270.97	Non-Hazardous Non-Hazardous Non-Hazardous	Lynn Landfill, Lynn, MA Allied Niagara Fall Landfill, Niagara Falls, NY Winchendon Landfill, in Winchendon, MA			
Status Report No. 9	11/8/2023				No Soil Transported		
RAM Completion Report	5/7/2024				Status Reports Summary Completion Report		
					Tons	CY	CY
			Hazardous Waste	Heritage Environmental Services, Roachdale, IN	18,694	10,996	10,129
			Non-Hazardous	Lynn Landfill, Lynn, MA	8,183	4,814	4,918
			Hazardous Waste	Allied Niagara Fall Landfill, Niagara Falls, NY	3,791	2,230	2,489
			Non-Hazardous	Winchendon Landfill, in Winchendon, MA	271	159	160
Total:					30,938.41	18,199	17,696

General Notes:

1. All volumes are in tons.
2. CID: Contained In Determination
3. 1.7 tons per cubic yard
4. Weight in tons reported according to RTN 3-34742 RAM Status Reports

Table 2-2. GLX Contained-In Determinations (RTN 3-34742)
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Contained-In Determination Number	Date	Cubic Yards	Description
CID #1	1/6/2020	up to 1,500	Characterize Phase 2 excavations on the west side of ROW
CID #1, Amend #1	3/18/2020	approx. 2,500	Planned Washington Street excavations
CID #1, Amend #2	4/20/2020	approx. 265	Test pits with ROW for drainage structures and stockpiled soil from deep drilled shafts
CID #2	9/11/2020	up to 800	Stockpiled soil generated during deep drainage structures excavation
CID #3	5/26/2021	up to 360	Washington Street pump station utility trench and stockpiled soil generated during pump station utility installations
	7/22/2021		Revision CID #3, noted soil was not "co-mingled".
CID #4	7/23/2021	approx. 340	Stockpiled soil generated during Washington Street pump station utility manhole excavations
CID #5	11/15/2021	approx. 500	Stockpiled soil (~500 cubic yards) generated during the excavation and removal of an Underground Storage Tank (UST) at the Washington Street Pump Station
CID #6	11/15/2021	approx. 20	Stockpiled soil generated from the cleanup of runoff sediment at the Washington Street Pump Station.
CID #7	12/17/2021	approx. 40	Stockpiled soil generated from the clean out of the Washington Street Pump Station House
CID #8	1/20/2022	approx. 400	Stockpiled soil generated during site grading at the Washington Street Pump Station
CID #9	3/3/2022	approx. 120	Stockpiled soil generated during site grading at the Washington Street Pump Station
CID #10	4/21/2022	approx. 60	Stockpiled soil generated during site grading at the Washington Street Pump Station
CID #11	9/8/2022	approx. 80	Stockpiled soil generated during site grading at the Washington Street Pump Station
CID #12	11/17/2022	approx. 260	Stockpiled soil generated from site landscaping at the Washington Street Pump Station
CID #13	10/13/2023	up to 20	Stockpile soil generated during manhole drainage clean outs under the Washington Street Bridge.
CID #14	12/20/2023	up to 20	Stockpile soil generated during manhole drainage clean outs under the Washington Street Bridge.
Total:		7,285.00	

General Notes:

1. CID: Contained-In Determination

Table 2-3. GLX Right of Way Soil Characterization
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Date	Appendix	Collected by	Documentation
May 2010-April 2014	C-1	Kleinfelder	MBTA
May 2019; October-November 2019	C-2	Unknown	BSC Group, letter of 12/23/2019 to MassDEP
October 2019-April 2020	C-3	TRC	RAM Status Report No. 2, May 15, 2020
April 2020 -August 2020	C-4	TRC	RAM Status Report No. 3, May 15, 2020
November 2020 -February 2021	C-5	TRC	RAM Status Report No. 4, May 10, 2021
April 2021 and June 2021	C-6	TRC	RAM Status Report No. 5, October 27, 2021
October 2021 -January 2022	C-7	TRC	RAM Status Report No. 6, May 6, 2022
March 2022	C-8	TRC	RAM Status Report No. 7, October 6, 2022
July 2022 and November 2022	C-9	TRC	RAM Status Report No. 8, May 15, 2023
September 2023	C-10	TRC	RAM Status Report No. 9, November 8, 2023

General Notes:

1. ROW: Right of Way

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Quarterly Groundwater Sampling 5/23/2006 5/24/2006 5/25/2006	SH-MW1, SH-MW2, SH-MW3, GEO-1, GEO-2, MW-1, MW-GEO-3, GEO-4, GEO-5, GEO-6, MW101, MW102 MW103, SH-4	NA Field Duplicate of GEO-3 NA
Groundwater Sampling 8/7/2006	MW103	NA
Quarterly Groundwater Sampling 10/4/2006 10/5/2006	SH-MW1, SH-MW2, SH-MW3, GEO-3 GEO-4, GEO-5 and GEO-1, GEO-2, MW101, MW102, MW103, MW104 and	Field Duplicate MW900 (GEO-3) NA
Quarterly Groundwater Sampling 1/16/2007 1/17/2007 1/18/2007	SH-MW1, SH-MW2, GEO-3, GEO-4, GEO-5, GEO-6, SH-MW3, MW-1, MW-3, GEO-1 and GEO-2 MW103, MW106, MW107, MW108, MW109, MW110 and	Field Duplicate MW900 (GEO-6) Field Duplicate MW800 (GEO-1) NA
Groundwater Sampling 2/20/2007 3/23/2007	MW113 and MW114 MW112A, MW115R AND MW116	NA NA
Quarterly Groundwater Sampling 4/12/07 4/13/07 4/16/07 5/23/07	SHMW1, SHMW3, GEO1, GEO2 and MW113 GEO3, MW101, MW102, MW103, MW104, MW106, SHMW2, GEO4, GEO5, GEO6, MW105, MW108, MW109, MWCS1	NA Field Duplicate MW900 (MW101) Field Duplicate MW901 (GEO6) NA
Quarterly Groundwater Sampling 7/18/2007 7/19/2007 7/20/2007	MW102, MW107, MW108, MW11, MW112A, MW113, MW114, MW115R, M2116 and MW117S SHMW2, MW104, MW105, MW106, MW117T, MW117D, MW118S, MW118T and MW118D	Sample from MW102 was used for MS/MSD Field Duplicate MW900 (MW113) Field Duplicate MW901 (MW116) NA NA
Groundwater Sampling 8/22/07 8/30/07	MW119S, MW119T, MW120S and MW120D MW118S, MW118T and MW118D	NA NA
Quarterly Groundwater Sampling 10/10/2007 10/11/2007 10/12/2007 10/15/2007 10/22/2007	MW102, MW105, MW106, MW107, MW108, MW111, MW112A, MW113, MW114, MW115 MW117T, MW117D, MW118S, MW118T, MW118D MW116, MW119S, MW119T, MW120S, MW120D, MW201, MW104, MW117S MW121S, MW121D	Sample from MW102 was used for MS/MSD Field Duplicate MW900 (MW113) NA Field Duplicate MW901 (MW116) NA NA
Quarterly Groundwater Sampling 1/9/2008 1/10/2008 1/11/2008 1/15/2008 1/16/2008 1/17/2008	MW105, MW115 MW102, MW106, MW107, MW108, MW111, MW112A MW104, MW113, MW114, MW116, MW117S, MW118S, MW201, MW202 MW117T, MW117D, MW118T, MW119S, MW120S, MW118D, MW119T MW120D	NA Sample from MW102 was used for MS/MSD Field Duplicate MW900 (MW113) Field Duplicate MW901 (MW116) NA NA NA
Groundwater Sampling 1/30/2008	MW122	NA
Quarterly Groundwater Sampling 4/15/2008 4/16/2008 4/17/2008 4/18/2008	GEO-1, SH-MW3, MW3, MW104, MW113, MW116, MW201, MW202, MW203 MW117S, MW117T, MW117D, MW118T, MW118D, MW102, MW106, MW107, MW108, MW109, MW111, MW112A, MW114, MW115R, MW120D, MW121S, MW105	Field duplicate MW113 (MW900) Field duplicate MW116 (MW901) NA Sample from MW102 was used for MS/MSD NA

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Quarterly Groundwater Sampling 7/14/2008	MW105, MW112A, MW121S, MW121D, MW122	Field duplicate MW112A (MW900) Field duplicate MW121D (MW901) Sample from MW104 was used for MS/MSD
7/15/2008	GEO-1, GEO-2, MW-3, MW104, MW118S, MW118T, MW118D, MW119S, MW119T, MW120S, MW120D, MW116, MW117S, MW117T, MW117D, MW118D	NA
7/16/2008		
Quarterly Groundwater Sampling 10/21/2008	MW104, GEO-1, GEO-2 MW116, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW202, MW-3	Sample from MW104 was used for MS/MSD
10/22/2008	MW105, MW112A, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122	Field duplicate MW112A (MW901) Field duplicate MW121D (MW900)
Quarterly Groundwater Sampling 4/15/2008	GEO-1, SH-MW3, MW3, MW104, MW113, MW116, MW201, MW202, MW203	Field duplicate MW113 (MW900) Field duplicate MW116 (MW901) NA
4/16/2008	MW117S, MW117T, MW117D, MW118T, MW118D,	NA
4/17/2008	MW102, MW106, MW107, MW108, MW109, MW111, MW112A, MW114, MW115R, MW120D, MW121S, MW105	Sample from MW102 was used for MS/MSD
4/18/2008		NA
Quarterly Groundwater Sampling 7/14/2008	MW105, MW112A, MW121S, MW121D, MW122	Field duplicate MW112A (MW900) Field duplicate MW121D (MW901) Sample from MW104 was used for MS/MSD
7/15/2008	GEO-1, GEO-2, MW-3, MW104, MW118S, MW118T, MW118D, MW119S, MW119T, MW120S, MW120D, MW116, MW117S, MW117T, MW117D, MW118D	NA
7/16/2008		
Quarterly Groundwater Sampling 10/21/2008	MW104, GEO-1, GEO-2 MW116, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW202, MW-3	Sample from MW104 was used for MS/MSD
10/22/2008	MW105, MW112A, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122	Field duplicate MW112A (MW901) Field duplicate MW121D (MW900)
Quarterly Groundwater Sampling 1/12/2009	MW105, MW112A, MW121S, MW121D, MW122	Field duplicate MW112A (MW900) Field duplicate MW121D (MW901) NA
1/13/2009	GEO-1, GEO-2, MW117S, MW117T, MW117D, MW119S, MW104, MW-3, MW116, MW118S, MW118T, MW118D	NA
1/14/2009		Sample from MW104 was used for MS/MSD
Quarterly Groundwater Sampling 4/13/2009	GEO-1, GEO-2, MW105, MW112A, MW119S, MW119T, MW121S, MW121D, MW122	Field duplicate MW121D (MW900) Field duplicate MW112A (MW901) NA
4/14/2009	MW-3, MW104, MW117S, MW117T, MW117D, MW118T, MW102, MW116, MW118S	NA
4/15/2009		NA
Quarterly Groundwater Sampling 7/14/2009	MW105, MW112A, MW116, MW118T, MW121S, MW121D, MW202	Field duplicate MW121D (MW900) Field duplicate MW112A (MW901) Sample from MW104 was used for MS/MSD
7/15/2009	GEO-1, GEO-2, MW-3, MW104, MW117S, MW117T, MW117D, MW118S, MW118D, MW119S, MW119T,	
Quarterly Groundwater Sampling 10/14/2009	GEO-1, GEO-2, MW104, MW105, MW112A, MW116, MW117S, MW117D, MW118S, MW118D, MW121S, MW119T, MW119S, MW120S, MW120D, MW118T MW117T, MW3	Field duplicate MW112A (MW900) Field duplicate MW118D (MW901) Sample from MW104 was used for MS/MSD
10/15/2009		
10/16/2009		
Annual Groundwater Sampling 4/12/2010	MW104, MW105, MW112A, MW118S, MW118T, MW118D, MW121S, MW121D, MW122, MW202	Field duplicate MW112A (MW900) Sample from MW104 was used for MS/MSD
4/13/2010	GEO-1, GEO-2, SH-MW3, MW116, MW117S, MW117T, MW117D, MW119S, MW119T, MW120S, MW120D	Field duplicate MW116 (MW901)
Semi-Annual Groundwater Sampling 10/27/2010	MW112A, MW122	NA

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Annual Groundwater Sampling 4/20/2011 4/21/2011 4/22/2011	MW105, MW112A, MW117D, MW118S, MW118T, GEO-2, SH-MW3, MW104, MW116, MW117S, MW117T GEO-1, MW119S, MW119D, MW120S, MW120D, MW202	Field duplicate MW112A (MW900) Field duplicate MW116 (MW901) Sample from MW104 was used for MS/MSD
Semi-Annual Groundwater Sampling 11/16/2011	MW112A, MW122	NA
Annual Groundwater Sampling 4/16/2012 4/17/2012	SH-MW-3, MW112A, MW117S, MW117T, MW117D, MW118D, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D GEO-1, MW104, MW105, MW116, MW118T, MW122, MW202	Field duplicate MW112A (MW900) Field duplicate MW116 (MW901) Sample from MW104 was used for MS/MSD
Semi-Annual Groundwater Sampling 11/12/2012	MW112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling 4/23/2013 4/24/2013 5/1/2013	SH-MW-3, MW105, MW117T, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122, MW202 GEO-1, MW104, MW112A, MW116, MW117S, MW117D, MW118S, MW118T, MW118D GEO-2	NA Field duplicate MW116 (MW900) Field duplicate MW112A (MW901) Sample from MW104 was used for MS/MSD
Semi-Annual Groundwater Sampling 11/18/2013	MW112A, MW118D, MW121D, MW122	NA
Kleinfelder Groundwater Sampling 2/6/2014 4/8/2014 4/9/2014 4/14/2014 4/15/2014	KE-114-140206, KE-115-140206, KE-116-140206, KE-117-140206, MW-SR-140206, WashSW-140206 KE-202D, KE-202S KE-117 KE-204, KE-206, KE-208 KE-205, KE-207, KE-209, KE-210	Sample from WashSW-140206 was a grab sample from the base of an open excavation. NA NA NA NA
Annual Groundwater Sampling 4/30/2014 5/1/2014 6/11/2014	MW104, MW121S, MW121D, MW122, SH-MW-3, GEO-1, GEO-2 MW117S, MW117T, MW117D, MW118S, MW118D, MW118T, MW119S, MW119T, MW120S, MW120D, MW116 MW112A	Sample from MW104 was used for MS/MSD Field duplicate MW116 (MW900) NA
Semi-Annual Groundwater Sampling 11/18/2014	MW112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling 4/2/2015 4/3/2015 4/17/2015	MW104, MW116, MW117S, MW117T, MW117D, MW118S, MW118D, MW119S, MW119T, MW121S, MW121D, MW122, SH-MW-3, GEO-1, GEO-2 MW118T, MW120S, MW120D MW112A	Sample from MW104 was used for MS/MSD Field duplicate MW116 (MW901) Field duplicate MW112A (MW900)
Semi-Annual Groundwater Sampling 11/19/2015	MW118D, MW121D, MW122	NA
Annual Groundwater Sampling 4/28/2016 4/29/2016	MW112A, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW119S, MW119T, MW120S, MW120D, MW121S, MW121D, MW122, GEO-1 MW104, MW116, MW202, GEO-2	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from MW104 was used for MS/MSD

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Semi-Annual Groundwater Sampling 11/21/2016	MW112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling 4/17/2017	MW104, MW116, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW121S, MW121D, MW122, MW202, GEO-1	Field duplicate MW116 (MW900) Field duplicate MW112A (MW901) Sample from MW104 was used for MS/MSD
4/18/2017	MW112A, MW119S, MW119T, MW120S, MW120D, GEO-2	
4/28/2017	SH-MW-2, MW104	
Semi-Annual Groundwater Sampling 11/8/2017 11/10/2017	MW118D, MW121D, MW122 MW112A	NA
Annual Groundwater Sampling 4/3/2018	MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW119S, MW119T, MW121S, MW121D, MW122	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from MW104 was used for MS/MSD
4/4/2018	GEO-1, GEO-2, MW104, MW112A, MW116, MW120S, MW120D, MW202, SH-MW-2	
Semi-Annual Groundwater Sampling 11/15/2018	MW 112A MW118D, MW121D, MW122	NA
Annual Groundwater Sampling 4/15/2019	MW112A, MW117S, MW117T, MW117D, MW118S, MW118D, MW121S, MW121D, MW122	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from SHMW2 was used for MS/MSD
4/16/2019	MW116, MW118T, MW119S, MW119T, MW120S, MW120D, MW202, SHMW2, GEO-1, GEO-2	
Semi-Annual Groundwater Sampling 11/23/2019	MW 112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling 4/16/2020	MW112A, MW117S, MW117T, MW117D, MW118S, MW118D, MW121S, MW121D, MW122	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from MW202 was used for MS/MSD
4/17/2020	MW116, MW118T, MW119S, MW119T, MW120S, MW120D, MW202, GEO-1, GEO-2	
Semi-Annual Groundwater Sampling 11/18/2020	MW 112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling 4/13/2021	MW112A, MW117S, MW117T, MW117D, MW118S, MW118T, MW118D, MW121S, MW121D, MW122	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from GEO-1 was used for MS/MSD
4/14/2021	MW116, MW119S, MW119T, MW120S, MW120D, MW202, GEO-1, GEO-2	
Semi-Annual Groundwater Sampling 11/30/2021	MW 112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling 4/12/2022	MW118S, MW118T, MW118D, MW117T, MW117S, MW117D	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from GEO-1 was used for MS/MSD
4/13/2022	MW120S, MW120D, MW119S, MW119T, MW121S, MW121D, GEO-1, MW122, MW202, MW116	
4/14/2022	GEO-2 and MW112A	
Semi-Annual Groundwater Sampling 11/29/2022	MW 112A, MW118D, MW121D, MW122	NA

Table 4-1. Summary of Groundwater Sampling Activities
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sampling Event and Date	Sampled Locations	QA/QC Samples
Annual Groundwater Sampling 4/17/2023	MW118S, MW118T, MW118D, MW117T, MW117S, MW117D, MW122, MW119S, MW119T	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from GEO-1 was used for MS/MSD
4/18/2023	MW120S, MW120D, MW121S, MW121D GEO-1, GEO-2, MW202, MW116	
5/11/2023	MW112A	
Additional Sampling for PSS 9/15/2023	MW108	NA
Semi-Annual Groundwater Sampling 11/7/2023	MW 112A, MW118D, MW121D, MW122	NA
Annual Groundwater Sampling 4/2/2024	MW107, MW112A, MW118D, MW118S, MW118T, MW117D, MW117S, MW117T, MW119S, MW119T, GEO- 1, MW108, MW120S	Field duplicate MW116 (MW900) Field duplicate GEO-2 (MW901) Sample from GEO-1 was used for MS/MSD
4/3/2024	MW102, MW103, MW106, MW116, MW120D, MW121S, MW121D, MW201, MW202, GEO-5, GEO-6, SH-MW2R	
4/4/2024	MW104R, MW109, MW122, GEO-2, GEO-4,	
Semi-Annual Groundwater Sampling 9/20/2024	MW104R	NA
11/14/2024	MW104R, MW 112A, MW118D, MW121D, MW122	

General Notes:

1. NA = not applicable.
2. QA/QC = quality assurance/quality check.
3. MS/MSD = matrix spike/matrix spike duplicate.
4. VOC = volatile organic compound.
5. All groundwater samples submitted for VOC testing. Selected samples collected in January 2007, April 2010, April 2011, April 2012, April 2013, April 2014, May 2014, June 2014, April 2015, April 2016, April 2017, April 2018, April 2019, April 2020, April 2021, April 2022, April and May 2023, and April 2024 were also submitted for natural attenuation parameter testing.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					GEO-1	GEO-1	GEO-1	GEO-1	GEO1	GEO1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					GEO-1	GEO-1	GEO-1	GEO-1	MW800 (FD)	GEO1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	GEO-1	
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					8/16/04	5/23/06	10/5/06	1/17/07	1/17/07	4/12/07	4/15/08	7/15/08	10/21/08	1/13/09	4/13/09	7/15/09	10/14/09	4/13/10	4/22/11	4/17/12	4/24/13	4/30/14	4/2/15	4/28/16	4/17/17	4/4/18	4/16/19	4/17/20	4/14/21	4/13/22	4/18/23	4/2/24
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					Geolnsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard																												
Volatile Organic Compounds (VOCs)					8260	µg/l																										
Acetone			50000	50000	< 400	< 5.0	< 5.0	< 5.0	< 5.0	9.7	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10	< 50	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0
Benzene			1000	10000	< 20	< 0.50	< 0.50	< 0.50	< 0.50	0.27 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 1.0	< 0.50	< 0.50	< 0.50	< 0.5
Bromodichloromethane			6	50000	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			50000	50000	< 200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 5.0
Carbon disulfide			NS	NS	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon tetrachloride			2	5000	< 20	3.6	1.4	2.3	2.3	5.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			200	1000	< 20	0.76 J	0.86 J	0.76 J	0.84 J	0.77 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			NS	NS	< 40	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			50	20000	< 20	< 1.0	< 1.0	0.60 J	0.61 J	1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			NS	NS	< 40	< 2.0	3.7	< 2.0	1.8 J	6.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			60	8000	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			2000	20000	< 20	4.3	2.9	5.4	5.6	10.6	< 1.0	0.38 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane			5	20000	< 20	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	13.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			80	30000	39.8	989	1330 E	247	241	8980	3.0	26.2	1.4	1.3	1.7	< 1.0	2.0	< 1.0	7.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethylene			20	50000	< 20	4.3	2.3	3.3	< 1.0	8.7	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethylene			90	50000	< 20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			3	50000	< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dioxane			5000	50000	NT	< 25	< 25 R	< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	367	< 25	< 50	< 25 K-	< 25	< 100	< 630	< 130	< 130	< 500	< 250	< 250	< 250	< 250
Ethylbenzene			20000	5000	< 20	< 1.0	< 1.0	< 1.0	< 1.0	0.41 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			NS	NS	< 200	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			NS	NS	< 20	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
Methyl tert-butyl ether			50000	50000	< 20	64.2	5.3 J+	2.5	2.7	6.9 J+	7.9	< 1.0	< 1.0	0.26 J	1.1	< 1.0	4.8	< 1.0	< 1.0	< 1.0	< 1.0 K-	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
Methylene chloride			2000	50000	< 200	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			700	20000	< 20	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
Tert-amyl methyl ether			NS	NS	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			10	50000	< 20	5.7	3.0 J	5.7	5.8	15.6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethylene (PCE)			20	30000	1880	18600	19500	17300	18000	48500	135	268	115	76.1	64.3	71.5	698	79.2	2580	171	85.1	252	162	134	1340	70.9	32.9	240	48	25	23	18
Tetrahydrofuran			NS	NS	NT	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 G	< 10	< 10	< 50	< 10	< 10	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Toluene			50000	40000	< 20	1.2	0.72 J	1.1	0.99 J	2.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			4000	20000	1720	19100	9620 J+	13300	14200	42500 J+	29.5	217	8.5	9.2	10.0	5.9	16.6 J+	7.0	12.2	3.7	2.1	2.3	3.0	1.3	9.1	< 1.0	< 1.0	5.8	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			900	50000	< 20	< 1.0	< 1.0	0.94 J	0.99 J	3.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			5	5000	898	10000	5530	9090	9660	30600	18.9	70.6	11.0	8.9	8.0	10.1	31.2	8.2	35.6	6.5	4.8	5.9	7.1	5.4	2.2 J	3						

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					GEO-2	GEO-2	GEO-2	GEO-2	GEO2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					GEO-2	GEO-2	GEO-2	GEO-2	GEO2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					8/16/04	5/23/06	10/5/06	1/17/07	4/12/07	7/15/08	10/22/08	1/13/09	4/13/09	7/15/09	10/14/09	4/13/10	4/21/11	5/1/13	4/30/14	4/2/15	4/29/16	4/29/16	4/18/17	4/4/18	4/4/2018	4/16/2019	4/16/2019	4/17/2020	4/17/2020	
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					Geolnsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard																										
Volatile Organic Compounds (VOCs)					8260	µg/l																								
Acetone			50000	50000	487	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
Benzene			1000	10000	< 5.0	< 0.50	< 0.50	< 2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Bromodichloromethane			6	50000	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
2-Butanone (MEK)			500000	50000	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	
Carbon disulfide			NS	NS	< 25	< 5.0	< 5.0	4.5 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	
Carbon tetrachloride			2	5000	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene			200	1000	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane			NS	NS	< 10	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroform			50	20000	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	0.62 J	< 1.0	0.60 J	0.84 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.56 J	0.76 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Chloromethane			NS	NS	< 10	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene			60	8000	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane			2000	20000	< 5.0	2.2	2.0	< 5.0	2.5	1.1	< 1.0	< 1.0	0.29 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane			5	20000	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethylene			80	30000	23.2	14.2	26.3	25.2	11.5	13.4	8.4	7.0	17.0	6.5	10.8	13.8	3.7	7.8	3.8	3.1	4.3	4.9	1.5	1.1	1.1	< 1.0	< 1.0	2.3	2.6	1.7
cis-1,2-Dichloroethylene			20	50000	< 5.0	< 1.0	1.6	9.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
trans-1,2-Dichloroethylene			90	50000	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane			3	50000	< 5.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,4-Dioxane			5000	50000	NT	< 25	< 25 R	< 130	< 25	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 130	< 130	< 130	< 130	< 130	< 130	< 130	< 130	
Ethylbenzene			20000	5000	< 5.0	< 1.0	< 1.0	3.1 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
2-Hexanone			NS	NS	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
4-Isopropyltoluene			NS	NS	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	
Methyl tert-butyl ether			50000	50000	37.6	79.9	12.8 J+	9.8	16.5	< 1.0	5.9	0.45 J	< 1.0	0.29 J	0.56 J	< 1.0	< 1.0	4.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Methylene chloride			2000	50000	< 5.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	
Naphthalene			700	20000	< 5.0	< 5.0	< 5.0	8.3 J	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Tert-amyl methyl ether			NS	NS	NT	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	
1,1,1,2-Tetrachloroethane			10	50000	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrachloroethylene (PCE)			20	30000	285	131	693	1420	120	115	140	110	263 G	202	167	480	66.4	140	119	76.3	147	145	50.7	48.5	45.4	26.3	25.6	120	130	86
Tetrahydrofuran			NS	NS	NT	< 10	< 10	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
Toluene			50000	40000	< 5.0	< 1.0	< 1.0	3.4 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane (TCA)			4000	20000	490	125	376	867	147 J+	70.5	25.5	22.5	110	29.7	37.5 J+	61.9	4.3	16.0	15.5	11.4	18.4	20.4	5.2	3.7	3.6	1.1	1.1	9.2	9.5	11
1,1,2-Trichloroethane			900	50000	< 5.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethylene (TCE)			5	5000	60	27.3	170	602	36.0	22.8	20.9	19.7	99.7	31.7	33.4	103	14.7	14.3	12.2	9.9	12.7	12.8	7.1	6.1	6.0	4.4	4.2	6.1	6.4	3.8
Vinyl chloride			2	50000	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
m,p-Xylene			3000	5000	< 10	< 1.0	< 1.0	11.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	
o-Xylene			3000	5000	< 5.0	< 1.0	< 1.0																							

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-2	GEO-3	GEO-3	GEO-3	GEO-3	GEO-3	GEO3	GEO-4	GEO-4	GEO-4	GEO-4	GEO4	GEO4	GEO-5	GEO-5	GEO-5	GEO-5	GEO5	GEO5
					GEO-2	MW901	GEO-2	MW901	GEO-2	MW901	GEO-3	GEO-3	MW900 (FD)	GEO-3	MW900 (FD)	GEO3	GEO-4	GEO-4	GEO-4	GEO-4	GEO4	GEO4	GEO-5	GEO-5	GEO-5	GEO-5	GEO5	GEO5
					5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	
					4/14/2022	4/14/2022	4/18/2023	4/18/2023	4/4/2024	4/4/2024	8/16/04	5/24/06	5/24/06	10/4/06	10/4/06	1/16/07	4/13/07	8/16/04	5/24/06	10/4/06	1/16/07	4/16/07	4/4/24	8/16/04	5/24/06	10/4/06	1/16/07	
					GEI	GEI	GEI	GEI	GEI	GEI	Geolnsight	GEI	GEI	GEI	GEI	GEI	Geolnsight	GEI	GEI	GEI	GEI	GEI	Geolnsight	GEI	GEI	GEI	GEI	
Analyte	Method	Units	Method 1 GW-3 Standard	Method 1 GW-3 Standard																								
Volatile Organic Compounds (VOCs)					8260	µg/l																						
Acetone			50000	50000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 1000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2000	< 5.0	< 5.0	< 100	< 50	<120	< 2000	< 5.0	< 5.0	< 250	< 5.0	<5.0
Benzene			1000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 100	< 0.50	< 0.50	< 10	< 5.0	<12	< 100	< 0.50	< 0.50	< 25	< 0.50	<0.5
Bromodichloromethane			6	50000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	<25	< 100	< 1.0	< 1.0	< 50	< 1.0	<1.0
2-Butanone (MEK)			50000	50000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1000	< 5.0	< 5.0	< 100	< 50	<120	< 1000	< 5.0	< 5.0	< 250	< 5.0	<5.0
Carbon disulfide			NS	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 50	<50	< 5.0	< 5.0	< 250	< 5.0	<2.0	
Carbon tetrachloride			2	5000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	<25	< 100	< 1.0	< 1.0	< 50	< 1.0	<1.0
Chlorobenzene			200	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	< 1.0	< 20	< 10	<25	< 100	< 1.0	< 1.0	< 50	< 1.0	<1.0
Chloroethane			NS	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 100	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 200	< 2.0	< 2.0	< 40	< 20	<50	< 200	< 2.0	< 2.0	< 100	< 2.0	<2.0
Chloroform			50	20000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 100	< 1.0	2.5	< 20	< 10	<25	< 100	< 1.0	0.62 J	< 50	< 1.0	<1.0
Chloromethane			NS	NS	<2.0	<2.0																						

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "c" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					GEO-6	GEO-6	GEO-6	GEO-6	GEO-6	GEO6	GEO-6	GEO6	MW-1	MW-1	MW-1	MW-1	MW1	MW-101	MW101	MW101	MW101	MW101	MW-102	MW102	MW102	MW102	MW102	MW102	MW102	MW102	MW102	MW102			
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					GEO-6	GEO-6	GEO-6	GEO-6	MW900 (FD)	GEO6	MW901 (FD)	GEO6	MW-1	MW-1	MW-1	MW-1	MW1	MW-101	MW101	MW101	MW101	MW900	MW-102	MW102	MW102	MW102	MW102	MW102	MW102	MW102	MW102				
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	7/1/02	8/9/04	5/23/06	1/17/07	4/17/07	5/24/06	10/5/06	1/17/07	4/13/07	4/13/07	5/24/06	10/5/06	1/16/07	4/13/07	7/18/07	10/10/07	1/10/08	4/17/08	4/3/24				
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					Geolnsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	SHA	Geolnsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI				
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard																															
Volatile Organic Compounds (VOCs)																																			
Acetone	8260	µg/l	50000	50000	< 200	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 50	< 5,000	< 40000	40.0	36.1	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0			
Benzene			1000	10000	< 10	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 5	< 5.00	< 2000	2.0	< 0.50	< 250	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	< 1.0	< 0.50	< 0.50	< 0.5			
Bromodichloromethane			6	50000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 5.00	< 2000	< 1.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0			
2-Butanone (MEK)			50000	50000	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 50	< 5.000	< 4000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5			
Carbon disulfide			NS	NS	< 5.0	< 5.0	< 5.0	0.81 J	< 5.0	< 10	< 5.0	< 20	< 5.000	< 10000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 2.0			
Carbon tetrachloride			2	5000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 5.00	< 2000	19.0	22.4	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0			
Chlorobenzene			200	1000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 5.00	< 2000	1.1	1.2	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0			
Chloroethane			NS	NS	< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 20	< 10000	< 4000	< 2.0	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 2.0	< 2.0		
Chloroform			50	20000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 7500	< 2000	3.7	1.6	< 500	1.8	< 1.0	< 1.0	< 1.0	1.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0			
Chloromethane			NS	NS	< 20	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 20	< 25000	< 4000	< 2.0	14.6	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 4.0	< 2.0	< 2.0	< 2.0			
1,4-Dichlorobenzene			60	8000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 25000	< 2000	< 1.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0			
1,1-Dichloroethane			2000	20000	< 10	2.0	4.4	1.7	1.6	0.92 J	1.1	< 10	< 7500	< 2000	59.8	59.9	< 500	< 1.0	< 1.0	< 1.0	< 1.0	1.6	< 1.0	0.88 J	< 1.0	< 1.0	0.42 J	2.1	4.1	0.51 J	< 1.0	< 1.0			
1,2-Dichloroethane			5	20000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 5.00	< 2000	4.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	3.9 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0			
1,1-Dichloroethylene			80	30000	< 10	4.6	11.0	4.4	3.2	2.8	3.8	< 10	< 5.00	< 2000	11500	1260	2290	8.7	21.1	14.1	< 1.0	4.6 G	6.3	50.2	30	< 1.0	23.6	39.7	51.8	22.2 C+	< 1.0	< 1.0			
cis-1,2-Dichloroethylene			20	50000	14.8	9.1	15.4	7.7	6.9	5.3	6.3	< 10	< 5.00	< 2000	24.3	7.7	< 500	< 1.0	< 1.0	1.3	< 1.0	2.1 G	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0			
trans-1,2-Dichloroethylene			90	50000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 7500	< 2000	< 1.0	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0			
1,2-Dichloropropane			3	50000	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 10	< 18000	< 2000	4.5	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 4.0	< 2.0	< 2.0	< 1.0	< 1.0			
1,4-Dioxane			5000	50000	NT	< 25	< 25 R	< 25	< 25	< 5.0	< 25	< 2500	NT	NT	< 25 R	< 25	< 13000	< 25	< 25 R	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	NT	< 50	< 25	< 25	< 250			
Ethylbenzene			20000	5000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 5.00	< 2000	2.8	4.4	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0			
2-Hexanone			NS	NS	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 50	< 5.000	< 20000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 5.0			
4-Isopropyltoluene			NS	NS	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 20	< 5.00	< 2000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 2.0			
Methyl tert-butyl ether			50000	50000	< 10	1.3	1.9 J+	1.2	1.2	0.80 J	0.81 J	< 20	< 10000	< 2000	< 1.0 J+	< 1.0	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.5 J+	2.7	< 1.0	NT	17.3	24.2	1.7 C+	< 2.0
Methylene chloride			2000	50000	< 100	< 2.0	< 2.0	< 2.0	1.3 J	2.5 J	< 2.0	< 20	< 5.000	< 20000	< 2.0	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	4.3	< 2.0	< 2.0	< 2.0			
Naphthalene			700	20000	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 20	< 5.000	< 2000	< 5.0	2.4 J	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 2.0			
Tert-amyl methyl ether			NS	NS	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 20	NT	NT	< 2.0	< 2.0	< 1000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	< 4.0	< 2.0	< 2.0	< 2.0			
1,1,1,2-Tetrachloroethane			10	50000	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.00	< 2000	38.1	22.8	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 10	< 5.0	< 5.0	< 1.0			
Tetrachloroethylene (PCE)			20	30000	782	675	1980	632	594 F+	618	497	1900	52000	24200	34400	74900	49600	163	171	192	94.0	90.7	200	898	692	20.3	524	685	606	438 C+	13	< 2.0	< 2.0		
Tetrahydrofuran			NS	NS	NT	< 10	< 10	< 10	< 10	< 20	< 10	< 20	NT	NT	< 10	< 10	< 5000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	< 20	< 10	< 10	< 2.0			
Toluene			50000	40000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 7500	< 2000	19.6	15.3	< 500	< 1.0	< 1.0	0.38 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 2.0	< 1.0	< 1.0	< 1.0			
1,1,1-Trichloroethane (TCA)			4000	20000	27.8	42.5	77.2 J+	33.7	25.3	21.2	26.8	< 10	290000	112000	255000	135000	151000	110	146	131	50.5 J+	43.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	26.3	69.8	121	21.9 C+	< 1.0		
1,1,2-Trichloroethane			900	50000	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 7500	< 2000	85.8	16.2	< 500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 1.0	< 1.0			
Trichloroethylene (TCE)			5	5000	122	78.8	131	75.3	56.5	55.5	70.5	37	220000	128000	175000	120000	103000	50.5	30.2	38.4	47.2	45.7	15.6	89.1	57.0	2.0	46.1	6							

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW103 6 to 16 5/24/06 GEI	MW103 6 to 16 8/7/06 GEI	MW103 6 to 16 10/5/06 GEI	MW-103 6 to 16 1/16/07 GEI	MW103 6 to 16 1/18/07 GEI	MW103 6 to 16 4/13/07 GEI	MW103 6 to 16 4/3/24 GEI	MW-104 5 to 15 5/23/06 GEI	MW104 5 to 15 10/5/06 GEI	MW104 6 to 16 1/16/07 GEI	MW104 5 to 15 4/13/07 GEI	MW104 5 to 15 7/19/07 GEI	MW104 5 to 15 10/15/07 GEI	MW104 5 to 15 1/11/08 GEI	MW104 5 to 15 4/15/08 GEI	MW104 5 to 15 7/15/08 GEI	MW104 5 to 15 10/21/08 GEI	MW104 5 to 15 1/14/09 GEI	MW104 5 to 15 4/14/09 GEI	MW104 5 to 15 7/15/09 GEI	MW104 5 to 15 10/14/09 GEI	MW104 5 to 15 4/12/10 GEI	MW104 5 to 15 4/21/11 GEI	MW104 5 to 15 4/17/12 GEI	MW104 5 to 15 4/24/13 GEI	MW104 5 to 15 4/30/14 GEI	MW104 5 to 15 4/2/15 GEI	MW104 5 to 15 4/29/16 GEI	MW104 5 to 15 4/17/17 GEI	
Analyte	Method	Units	Method 1 GW-3 Standard	Method 1 GW-3 Standard																														
Volatile Organic Compounds (VOCs)					8260	µg/l																												NT
Acetone			50000	50000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	4.0 J	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0 J+	9.0	4.8	< 10	< 10	< 10	< 10		
Benzene			1000	10000	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 2.5	< 0.5	< 0.50	0.60	< 0.50	< 0.50	NT	0.43 J	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
Bromodichloromethane			6	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	0.31 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
2-Butanone (MEK)			50000	50000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
Carbon disulfide			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
Carbon tetrachloride			2	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene			200	1000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	2.7	10.3	6.1	4.7	6.9	5.6	2.3	< 2.0	3.9	5.9	< 2.0	< 2.0	2.8	4.2	< 2.0	< 2.0	2.6	1.9 J	< 2.0	< 2.0	< 2.0	< 2.0	
Chloroform			50	20000	< 1.0	< 1.0	< 1.0	0.65 J	0.62 J	< 5.0	< 1.0</																							

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO₃ per liter

Qualifying Notes:

- C- The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- K- The reported result is estimated.
- K+ The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW104 5 to 15 4/28/17 GEI	MW104 5 to 15 4/4/18 GEI	MW104R 5 to 15 4/4/24 GEI	MW104R 5 to 15 9/20/24 GEI	MW104R 5 to 15 11/14/24 GEI	MW105 19 to 29 5/24/06 GEI	MW105 19 to 29 10/5/06 GEI	MW105 19 to 29 1/17/07 GEI	MW105 19 to 29 4/16/07 GEI	MW105 19 to 29 7/19/07 GEI	MW105 19 to 29 10/10/07 GEI	MW105 19 to 29 1/9/08 GEI	MW105 19 to 29 4/18/08 GEI	MW105 19 to 29 7/14/08 GEI	MW105 19 to 29 10/22/08 GEI	MW105 19 to 29 1/12/09 GEI	MW105 19 to 29 4/13/09 GEI	MW105 19 to 29 7/14/09 GEI	MW105 19 to 29 10/14/09 GEI	MW105 19 to 29 4/12/10 GEI	MW105 19 to 29 4/20/11 GEI	MW105 19 to 29 4/17/12 GEI	MW105 19 to 29 4/23/13 GEI	MW106 9 to 19 1/18/07 GEI	MW106 9 to 19 4/13/07 GEI	MW106 9 to 19 7/19/07 GEI	MW106 9 to 19 10/10/07 GEI	MW106 9 to 19 1/10/08 GEI	MW106 9 to 19 4/17/08 GEI
Analyte	Method	Units	Method 1 GW-3 Standard	Method 1 Standard																													
Volatile Organic Compounds (VOCs)					8260	µg/l																											
Acetone			50000	50000	<10	<10	<50	<25	<25	<5.0	<5.0	<5.0	<5.0	NT	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 J+	<5.0	<5.0	<5.0	<5.0 J+	<5.0	<5.0	<10	<5.0	<5.0	NT	<5.0	<5.0	<5.0
Benzene			1000	10000	<0.50	<0.50	<5	<2.5	<2.5	<0.50	<0.50	<0.50	<0.50	NT	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Bromodichloromethane			6	50000	<1.0	<1.0	<10	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
2-Butanone (MEK)			50000	50000	<10	<10	<50	<25	<25	<5.0	<5.0	<5.0	<5.0	NT	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Carbon disulfide			NS	NS	<2.0	<2.0	<20	<10	<10	<5.0	<5.0	<5.0	<5.0	NT	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Carbon tetrachloride			2	5000	<1.0	<1.0	<10	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Chlorobenzene			200	1000	<1.0	<1.0	<10	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Chloroethane			NS	NS	<1.0	<1.0	<20	<10	<10	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Chloroform			50	20000	<1.0	<1.0	<10	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	NT	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Chloromethane			NS	NS																													

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- | | |
|----|---|
| C+ | The analyte found in associated method blank. |
| C | The result has a high bias due to surrogate recovery above upper control limits. |
| E | The value exceeds the calibration range. |
| F+ | The result has a high bias due to matrix spike recovery above upper control limits. |
| F- | The result has a low bias due to matrix spike recovery below lower control limits. |
| G | The result is estimated due to duplicate precision outside control limits. |
| J | The reported result is below the laboratory reporting limit and is estimated. |
| J+ | The reported result is estimated. |
| K- | The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits. |
| K+ | The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits. |
| R | The result is rejected due to gross exceedence of minimum response factor criteria. |

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location:					MW106	MW107	MW107	MW107	MW107	MW107	MW107	MW107	MW107	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW108	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	MW109	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General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "c" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

[illegible]

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- C+ The analyte found in associated method blank.
- C- The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A				
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW112A	MW112A	MW900 (FD)	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW901 (FD)	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A	MW112A				
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19	4 to 19				
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					11/12/12	4/24/13	4/24/13	11/18/13	6/11/14	11/18/14	4/17/15	4/17/15	4/28/16	11/21/16	4/18/17	4/18/2017	11/10/2017	4/4/2018	11/15/2018	4/15/2019	11/22/2019	4/16/2020	11/18/2020	4/13/2021	11/30/2021	4/14/2022	11/29/2022	5/11/2023	11/7/2023	4/2/2024		
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI		
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard																												
Volatile Organic Compounds (VOCs)																																
Acetone	8260	µg/l	50000	50000	< 10 K-	< 20	< 20	< 10 K-	< 10 K-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 25	< 25	< 25	< 10	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 10	< 25	< 12	
Benzene			1000	10000	< 1.0	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.43 J	0.23 J	0.23 J	< 1.0	< 1.3	< 1.3	< 1.3	< 0.50	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 1	< 2.5	< 1.2
Bromodichloromethane			6	50000	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5
2-Butanone (MEK)			50000	50000	< 10 K-	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 20	< 25	< 25	< 25	< 10	< 25	< 25	< 25	< 25	< 25	< 25	< 5	< 25	< 12	
Carbon disulfide			NS	NS	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 2.0	< 10	< 10	< 10	< 10	< 10	< 10	< 2	< 10	< 5.0	
Carbon tetrachloride			2	5000	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 1	< 5.0	< 2.5
Chlorobenzene			200	1000	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5
Chloroethane			NS	NS	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 4	< 10	< 5.0	
Chloroform			50	20000	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5
Chloromethane			NS	NS	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 4	< 10	< 5.0	
1,4-Dichlorobenzene			60	8000	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5	
1,1-Dichloroethane			2000	20000	48.1	24.2	37.0	73.5	18.3	64.1 G K-	23.2	25.2	14.1	77	34.1	30.1	88.1	25.3	25.3	38.5	36.9	51	48	40	35	24	35	24	35	50	39	28
1,2-Dichloroethane			5	20000	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5	
1,1-Dichloroethylene			80	30000	57.3	30.2	30.0	86.5	38.5	109 K+	39	42.9	21.5	132	47.7	43.0	92.5	33.0	33.0	57.3	63.1	79	98	58	63	45	67	45	67	27	53	46
cis-1,2-Dichloroethylene			20	50000	150	145	112	209	150	321	71.1	84.1	108	230	78.2	71.8	155	98.5	98.5	60.6	131.0	72	130	62	120	85	68	100	64	100	100	
trans-1,2-Dichloroethylene			90	50000	< 2.0	2.9	< 1.0	< 1.0	< 1.0	< 1.0 K+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5	
1,2-Dichloropropane			3	50000	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5
1,4-Dioxane			5000	50000	< 5.0	< 5.0	< 5.0	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 5	< 130	< 130	< 250	< 310	< 310	< 310	< 130	< 1200	< 1200	< 1200	< 1200	< 1200	< 1200	< 1200	< 500	< 1200	< 620	
Ethylbenzene			20000	5000	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5	
2-Hexanone			NS	NS	< 10	< 10	< 10	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 13	< 13	< 13	< 5.0	< 25	< 25	< 25	< 25	< 25	< 25	< 10	< 25	< 12	
4-Isopropyltoluene			NS	NS	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 2.0	< 10	< 10	< 10	< 10	< 10	< 10	< 4	< 10	< 5.0		
Methyl tert-butyl ether			50000	50000	28.8	19.0	14.1	64.6	4.6	47.3 K+	11.9	13.9	3.9	53.9	11.6	11.4	56	19.1	19.1	25.9	21.7	27	30	19	12	5	13	10	15	6	6	
Methylene chloride			2000	50000	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 2.0	< 10	< 10	< 10	< 10	< 10	< 10	< 4	< 10	< 5.0		
Naphthalene			700	20000	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 13	< 13	< 13	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10	< 4	< 10	< 5.0		
Tert-amyl methyl ether			NS	NS	< 4.0	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 5.0	< 5.0	< 5.0	< 2.0	< 10	< 10	< 10	< 10	< 10	< 10	< 4	< 10	< 5.0		
1,1,1,2-Tetrachloroethane			10	50000	< 10	< 10	< 10	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5	
Tetrachloroethylene (PCE)			20	30000	546	339	581	371	266	398	303	300	258	508	435	404	908	317	317	555	463	750	760	630	460	370	560	300	460	370	370	
Tetrahydrofuran			NS	NS	< 20 F- K-	< 20	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 25	< 25	< 25	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 4	< 10	< 5.0		
Toluene			50000	40000	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5	
1,1,1-Trichloroethane (TCA)			4000	20000	4.1	4.3	6.5	8.0	1.5	3.6	1.3	1.4	1.7	6.5	4.1	3.6	11.4	3.6	3.6	5.4	5.0	7.5	7.8	7.0	5.1	3.0	< 5	4.1	5.4	3.5	3.5	
1,1,2-Trichloroethane			900	50000	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 2	< 5.0	< 2.5	
Trichloroethylene (TCE)			5	5000	138	87.0	140	146	82.0	117	71	73	61.3	220.0	118.0	107	247	92.3	92.3	136	136	180	190	140	130	95	140	170	110	84	84	
Vinyl chloride			2	50000	< 2.0	< 2.0	4.4	0.90 J	< 1.0	0.77 J G K-	< 1.0	< 1.0	< 1.0	1.3	< 1.0	< 1.0	< 2.0	< 2.5	< 2.5	< 2.5	1.4	< 5.0	< 5.0	< 5.0								

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW112A	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116			
					MW112A	MW116	MW116	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW901 (FD)	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116	MW116
					4 to 19	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15	5 to 15
					11/14/2024	3/23/07	4/16/07	7/18/07	7/18/07	10/12/07	10/12/07	1/11/08	1/11/08	4/15/08	4/15/08	7/16/08	10/21/08	1/14/09	4/15/09	7/14/09	10/14/09	4/13/10	4/13/10	4/21/11	4/21/11	4/17/12	4/17/12	4/24/13	4/24/13	5/1/14	5/1/14	5/1/14	5/1/14	5/1/14
Analyte	Method	Units	Method 1 GW-3 Standard	Method 1 GW-3 Standard																														
Volatile Organic Compounds (VOCs)					8260	µg/l																												
Acetone			50000	50000	< 20	< 5.0	< 5.0	NT	NT	< 10 J+	< 10 J+	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10 F+	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 20	< 10	< 20	< 20			
Benzene			1000	10000	< 2.0	0.24 J	< 0.50	NT	NT	< 1.0	< 1.0	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 2.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0			
Bromodichloromethane			6	50000	< 4.0	< 1.0	< 1.0	NT	NT	1.1 J	0.99 J	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0			
2-Butanone (MEK)			50000	50000	< 20	< 5.0	< 5.0	NT	NT	< 10 J+	< 10 J+	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10			
Carbon disulfide			NS	NS	< 8.0	< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	2.9 J	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10			
Carbon tetrachloride			2	5000	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0			
Chlorobenzene			200	1000	< 4.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0			
Chloroethane			NS	NS	< 8.0	< 2.0	< 2.0	2.4	2.3	2.4 J	2.4 J	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0			
Chloroform			50	20000	< 4.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0			
Chloromethane			NS	NS	< 8.0	< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0			
1,4-Dichlorobenzene			60	8000	< 4.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0 J+	< 2.0 J+	< 2.0	< 5.0	< 1.0	1.6	1.0	0.82 J	0.77 J	< 2.0	< 1.0	< 2.0	< 2.0			
1,1-Dichloroethane			2000	20000	30	135	4.4	97.3	96.9	80.1	79.3	18.9	15.6	66.8	64.5	114	109	72.5	101	69.7	92.2	63.9	68.9	27.8	23.4	52.8	51.8	31.5	25.8	38.5	41.9			
1,2-Dichloroethane			5	20000	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	0.23 J	0.20 J	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0			
1,1-Dichloroethylene			80	30000	52	107	2.7	33.8	34.0	24.8	22.4	14.7	11.8	46.3	45.7	78.4	79.8	56.5	70.6	35.2	68.8	49.1	51.9	22.4	14.1	43.3	42.3	26.7	39.4	46.1	50.3			
cis-1,2-Dichloroethylene			20	50000	93	103	21.7	415	431	346	341	49.5	42.9	105	102	286	319	146	84.1	92.7	133	80.7	92.1	84.6	68.3	115	112	94.8	144	107	116			
trans-1,2-Dichloroethylene			90	50000	< 4.0	1.8	< 1.0	4.3	4.4	2.5	2.4	0.88 J	1.3	< 1.0	< 1.0	< 2.0	1.3	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	1.6	1.6	1.8	< 1.0	< 1.0	< 2.0	1.1	< 2.0	< 2.0			
1,2-Dichloropropane			3	50000	< 4.0	< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0			
1,4-Dioxane			5000	50000	< 1000	< 25	< 25	NT	NT	< 50	< 50	< 25	< 25	< 25	< 25	< 50	< 25	< 50	< 25	< 50 F-	< 50	< 130	< 25	< 25	< 25	< 25 K-	< 25 K-	< 100	< 50	< 50	< 50			
Ethylbenzene			20000	5000	< 4.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0			
2-Hexanone			NS	NS	< 20	< 5.0	< 5.0	NT	NT	< 10 J+	< 10 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10			
4-Isopropyltoluene			NS	NS	< 8.0	< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0 J+	< 10 J+	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10			
Methyl tert-butyl ether			50000	50000	10	12.3	0.40 J	NT	NT	12.5	12.7	2.1 J+	1.3 J+	7.1	6.9	18.2	18.0	9.0	11.7	7.2	8.4	5.4	5.9	4.4	4.4	3.4	3.3	14.1	10.6 K-	4.4	4.8			
Methylene chloride			2000	50000	< 8.0	< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0			
Naphthalene			700	20000	< 8.0	< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0	0.68 J	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0 J+	< 10 J+	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 10	< 10			
Tert-amyl methyl ether			NS	NS	< 8.0	< 2.0	< 2.0	NT	NT	< 4.0	< 4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0 K-	< 4.0	< 4.0	< 4.0			
1,1,1,2-Tetrachloroethane			10	50000	< 4.0	< 5.0	< 5.0	NT	NT	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 25	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 2.0	< 2.0	< 2.0			
Tetrachloroethylene (PCE)			20	30000	420	1180	32.2	167	168	116	110	267	257 J+	603	607	864	839	795	796 G	1020	1010	860	933	323	166	774	778	527	396	618	670			
Tetrahydrofuran			NS	NS	< 8.0	30.6	13.8	NT	NT	< 20	< 20	< 10	< 10	< 10	< 10	< 20	< 10	< 20	< 10	< 20 F+	< 20	< 50	< 10	< 10	< 10	< 10	< 10	< 20	< 10	13.3 J	15.7 J			
Toluene			50000	40000	< 4.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0			
1,1,1-Trichloroethane (TCA)			4000	20000	< 4.0	21.6	0.67 J	10.6	10.7	9.4	9.2	3.3	2.5	10.7	16.0	15.6	12.8	16.6	8.5	14.3 J+	8.2	10.2	4.2	3.8	8.0	8.3	6.0	3.0	6.7	7.3	7.3			
1,1,2-Trichloroethane			900	50000	< 4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0			
Trichloroethylene (TCE)			5	5000	84	358	19.4	72.7	73.2	136	129	66.3	53.6	175	174	257	269	229	341	196	267	195	212	88.7	57.7	181	192	126	95.4	164	182			
Vinyl chloride			2	50000	28	14.1	3.2	185	182	84.9	76.4	3.1	2.3	2.6	2.7	7.2	21.3	13.9	6.3	6.1	6.9	5.7	6.1	13.5	9.0	8.8 K+	8.8 K+	3.8	< 1.0	1.8 J	2.2			
m,p-Xylene			3000	5000	< 8.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	1.2	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0			
o-Xylene			3000	5000	< 4.0	< 1.0	< 1.0	NT	NT	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	<				

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. *c* = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW116 5 to 15 4/2/15 GEI	MW116 MW900 (FD) 5 to 15 4/2/15 GEI	MW116 5 to 15 4/29/16 GEI	MW116 MW900 (FD) 5 to 15 4/29/16 GEI	MW116 5 to 15 4/17/17 GEI	MW116 MW900 (FD) 5 to 15 4/17/17 GEI	MW116 5 to 15 4/4/18 GEI	MW116 MW900 (FD) 5 to 15 4/4/18 GEI	MW116 5 to 15 4/16/19 GEI	MW116 5 to 15 4/16/19 GEI	MW116 5 to 15 4/17/20 GEI	MW116 MW900 (FD) 5 to 15 4/17/20 GEI	MW116 5 to 15 4/14/21 GEI	MW116 MW900 5 to 15 4/14/21 GEI	MW116 5 to 15 4/14/22 GEI	MW116 MW900 5 to 15 4/18/23 GEI	MW116 5 to 15 4/18/23 GEI	MW116 5 to 15 4/3/24 GEI	MW116 MW900 5 to 15 4/3/24 GEI	MW117D 60 to 70 7/19/07 GEI	MW117D 60 to 70 10/11/07 GEI	MW117D 60 to 70 1/15/08 GEI	MW117D 60 to 70 4/16/08 GEI	MW117D 60 to 70 7/16/08 GEI	MW117D 60 to 70 10/21/08 GEI	MW117D 60 to 70 1/13/09 GEI	
Analyte	Method	Units	Method 1 GW-3 Standard	Method 1 GW-3 Standard																											
Volatile Organic Compounds (VOCs)					8260	µg/l																									
Acetone			50000	50000	< 20	< 20	< 20	< 10	<10	<10	<10	<10	<10	<10	<25	<25	<12	<12	<5.0	<5.0	<5.0	<5.0	<12	<10	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+
Benzene			10000	10000	< 1.0	< 1.0	< 1.0	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	<2.5	<1.2	<1.2	<0.50	<0.50	<0.50	<0.50	<1.2	<1.0	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			6	50000	< 2.0	< 2.0	< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<2.5	<2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			50000	50000	< 10	< 10	< 10	< 5.0	<10	<10	<10	<10	<10	<10	<25	<25	<25	<25	<5.0	<5.0	<5.0	<5.0	<12	<10	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			NS	NS	< 10	< 10	< 10	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10	<10	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<5.0	<4.0	NT	< 5.0	< 5.0	6.5	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			2	5000	< 2.0	< 2.0	< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	<2.5	<2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			200	1000	< 2.0	< 2.0	< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	<2.5	<2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			NS	NS	< 4.0	< 4.0	< 4.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<5.0	<4.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			50	20000	< 2.0	< 2.0	< 2.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<2.5	<2.5	<1.0	<1.0	<1.0	<1.0	<2.5	<2.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			NS	NS	< 4.0	< 4.0	< 4.0	< 2.0	<1.0	<1.0	<1.0	<1.																			

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. *c* = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO₃ per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

[illegible]

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "c" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO₃ per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
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- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

[illegible]

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "c" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

[illegible]

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO₃ per liter

Qualifying Notes:

- C+ The analyte found in associated method blank.
- C- The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: MW118D MW118S MW118S MW118S MW118S MW118S MW118S																																
Sample Name: MW118D MW118S MW118S MW118S MW118S MW118S MW118S																																
Well Screen Interval (ft bgs): 70 to 80																																
Sample Date: 11/18/14 4/2/15 11/19/15 4/28/16 11/21/16 4/17/2017 70 to 80																																
Collected By: GEI																																
Analyte	Method	Units	Method 1 GW-3 Standard	Method 1 GW-3 Standard																												
Volatile Organic Compounds (VOCs)					8260	µg/l																										
Acetone			50000	50000	< 10	< 10	< 10	< 10	< 10	<10	< 10	< 10	< 10	< 10	< 10	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<5	<5	<5.0	<5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	
Benzene			1000	10000	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5	NT	NT	< 0.50	< 0.50	< 0.50	< 0.50	
Bromodichloromethane			6	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
2-Butanone (MEK)			50000	50000	< 5.0	< 5.0	< 5.0	< 5.0	< 10	<10	< 10	< 10	< 10	< 10	< 10	<5.0	<5.0	<5.0	<5.0	<5.0	<5	<5	<5	<5.0	<5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	
Carbon disulfide			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	<2.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0 J+	
Carbon tetrachloride			2	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene			200	1000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane			NS	NS	<2.0 G	<2.0	4.8	3.1	3.1	1.1	3.4	3.7	1.1	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	9	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	
Chloroform			50	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
Chloromethane			NS	NS	<2.0 G	<2.0	< 2.0	< 2.0	< 2.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	<2.0	NT	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	
1,4-Dichlorobenzene			60	8000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane			2000	20000	47.9	46.6	39.3	43.9	37.7	34.8	27.4	21.9	20.0	18.6	33.9	44	27	25	22	30	29	28	26	22	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloroethane			5	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethylene			80	30000	0.79 J K+	0.90 J	1.6	1.8	0.85 J	0.78 J	< 1.0	< 1.0	< 1.0	< 1.0	2.6	2.4	1.3	< 1.0	< 1.0	< 1.0	<1	<1	<1	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
cis-1,2-Dichloroethylene			20	50000	6.8	6.9	5.6	27.8	8.6	7.9	5	4.3	3.7	3.2	57.3	53	10	5.8	4.7	4.1	3.9	3.4	3.1	2.5	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
trans-1,2-Dichloroethylene			90	50000	< 1.0 K+	0.62 J	2.2	2.9	0.81 J	0.55 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane			3	50000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	
1,4-Dioxane			5000	50000	< 25	< 25	< 25	< 25	< 50	<130	< 130	< 130	< 130	< 130	< 130	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	NT	NT	< 25	< 25	< 25	< 25	
Ethylbenzene			20000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
2-Hexanone			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 10	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5	<5	<5	<5.0	<5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0		
4-Isopropyltoluene			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	<2.0	2.6	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			50000	50000	1.9 K+	0.69 J	0.89 J	< 1.0	1.3	0.81 J	< 1.0	1.1	1.3	1.3	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	<2.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
Methylene chloride			2000	50000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	<2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	
Naphthalene			700	20000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	<2.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	
Tert-amyl methyl ether			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	<2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	
1,1,1,2-Tetrachloroethane			10	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	
Tetrachloroethylene (PCE)			20	30000	2.2	5.1	39.7	49.8	6.5	5.8	2.7	1.8	1.6	40.9	38	27	2.2	1.1	<1.0	1.1	<1	1.5	<1.0	<1.0	0.39 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Tetrahydrofuran			NS	NS	< 10	< 10	< 10	< 10	< 10	<10	< 10	< 10	< 10	< 10	< 10	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	<2.0	NT	NT	< 10	< 10	< 10	< 10	
Toluene			50000	40000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane (TCA)			4000	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane			900	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethylene (TCE)			5	5000	6.9	4.6	17.6	14.4	3.3	2.6	1.7	1.5	1.5	1.1	11.4	11	7.9	2.7	1.7	<1.0	1.1	1.1	1.3	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Vinyl chloride			2	50000	< 1.0 G K-	< 1.0	1.9	20.2	3.1	0.93 J	2.4	1.9	< 1.0	1.1	11.8	19	3.8	3.3	1.9	<1.0	2.6	2.6	1.3	2.2	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
m,p-Xylene			3000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2	<2	<2	<2.0	<2.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
o-Xylene			3000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
Total Xylene			3000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	
Metals (Total)					6010B	µg/l																										
Arsenic			NS	900	NT	NT	NT	NT	NT	NT	NT	NT</																				

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. *c * = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	
					MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118S	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T	MW118T		
					3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	3 to 14	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5	39.5 to 49.5			
					10/21/08	1/14/09	4/15/09	7/15/09	10/14/09	4/12/10	4/20/11	4/24/13	5/1/14	4/2/15	4/28/16	4/17/17	4/3/18	4/15/19	4/16/20	4/13/21	4/12/22	4/17/23	4/2/24	7/20/07	8/30/07	10/11/07	1/15/08	4/16/08	7/15/08	10/21/08	1/14/09	
Analyte	Method	Units	Method 1 GW-3 Standard	Method 1 GW-3 Standard																												
Volatile Organic Compounds (VOCs)																																
Acetone	8260	µg/l	50000	50000	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Benzene			10000	10000	< 0.50	< 0.50	< 0.50 J+	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NT	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Bromodichloromethane			6	50000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
2-Butanone (MEK)			50000	50000	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Carbon disulfide			NS	NS	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
Carbon tetrachloride			2	5000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Chlorobenzene			200	1000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Chloroethane			NS	NS	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	
Chloroform			50	20000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			NS	NS	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			60	8000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			2000	20000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	35.4	34.4	44.2	42.3	41.9	37.0	33.4	
1,2-Dichloroethane			5	20000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethylene			80	30000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
cis-1,2-Dichloroethylene			20	50000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.45 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
trans-1,2-Dichloroethylene			90	50000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane			3	50000	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			5000	50000	< 25	< 25	< 25 J+	< 25	< 25	< 25	< 25	< 50	< 25	< 25	< 25	< 130	< 130	< 130	< 130	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	
Ethylbenzene			20000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			NS	NS	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	21.9	< 5.0	2.9 J	6.0	< 5.0	10.3	< 2.0	< 2.0	< 2.0	< 2.0	3.1	< 2.0	< 2.0	2.8	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			50000	50000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	2.4	3.1	2.2	2.5	2.2	2.3
Methylene chloride			2000	50000	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			700	20000	< 5.0	< 5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			NS	NS	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,1,1,2-Tetrachloroethane			10	50000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			20	30000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.29 J	< 1.0	0.38 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.8	2.2	2.9	2.7	2.5	2.4	2.1	
Tetrahydrofuran			NS	NS	< 10	< 10	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	NT	NT	< 10	< 10	< 10 J+	< 10	< 10	< 10
Toluene			50000	40000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			4000	20000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
1,1,2-Trichloroethane			900	50000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Trichloroethylene (TCE)			5	5000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.31 J	< 1.0	< 1.0	< 1.0	
Vinyl chloride			2	50000	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0</				

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. *c* = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW118T 39.5 to 49.5 4/14/09 GEI	MW118T 39.5 to 49.5 7/14/09 GEI	MW118T 39.5 to 49.5 10/15/09 GEI	MW118T 39.5 to 49.5 4/12/10 GEI	MW118T 39.5 to 49.5 4/20/11 GEI	MW118T 39.5 to 49.5 4/17/12 GEI	MW118T 39.5 to 49.5 4/24/13 GEI	MW118T 39.5 to 49.5 5/1/14 GEI	MW118T 39.5 to 49.5 4/3/15 GEI	MW118T 39.5 to 49.5 4/28/16 GEI	MW118T 39.5 to 49.5 4/17/17 GEI	MW118T 39.5 to 49.5 4/3/18 GEI	MW118T 39.5 to 49.5 4/16/19 GEI	MW118T 39.5 to 49.5 4/17/20 GEI	MW118T 39.5 to 49.5 4/13/21 GEI	MW118T 39.5 to 49.5 4/12/22 GEI	MW118T 39.5 to 49.5 4/17/23 GEI	MW118T 39.5 to 49.5 4/2/24 GEI	MW119S 5 to 20 8/22/07 GEI	MW119S 5 to 20 10/12/07 GEI	MW119S 5 to 20 1/15/08 GEI	MW119S 5 to 20 4/16/08 GEI	MW119S 5 to 20 7/15/08 GEI	MW119S 5 to 20 10/22/08 GEI
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard																								
Volatile Organic Compounds (VOCs)	8260	µg/l																										
Acetone			50000	50000	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 10	< 10	< 10	< 10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0
Benzene			1000	10000	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	< 0.50 J+	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane			6	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	<1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			50000	50000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			2	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	<1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene			200	1000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	<1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			50	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	<1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dichlorobenzene			60	8000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	<1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane			2000	20000	33.6	40.0	53.3 J+	37.8	35.9	28.8	26.9	28.4	31.3	31.3	26.7	22.4	5.8	23	16	1.5	15	9.6	<1.0 J+	<1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane			5	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	<1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethylene			80	30000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	<1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,2-Dichloroethylene			20	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.45 J	< 1.0	0.55 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
trans-1,2-Dichloroethylene			90	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane			3	50000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
1,4-Dioxane			5000	50000	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	<130	<130	<130	<250	<250	<250	<250	<250	< 25 J+	< 25	< 25	< 25	< 25	< 25
Ethylbenzene			20000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Hexanone			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0 J+	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0
4-Isopropyltoluene			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether			50000	50000	2.0	1.9	7.5	1.2	2.4	1.8	7.1	0.94 J	1.5	1.1	1.9	1.6	1.1	2.1	<2.0	<2.0	<2.0	<2.0	5.2 J+	2.0	2.1	0.83 J	< 1.0	< 1.0
Methylene chloride			2000	50000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Naphthalene			700	20000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tert-amyl methyl ether			NS	NS	< 2.0	< 2.0	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1,1,1,2-Tetrachloroethane			10	50000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Tetrachloroethylene (PCE)			20	30000	2.0	1.7	2.8	1.6	2.1	1.5	1.0	1.3	2.0	0.90 J	<1.0	<1.0	1.4	1.1	<1.0	<1.0	<1.0	<1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrahydrofuran			NS	NS	< 10 J+	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<10	<10	<10	<2.0	<2.0	<2.0	<2.0	<2.0	< 10 J+	< 10	< 10	< 10	< 10	< 10
Toluene			50000	40000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane (TCA)			4000	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane			900	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethylene (TCE)			5	5000	< 1.0	0.50 J	0.80 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.26 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride			2	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m,p-Xylene			3000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene			3000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Xylene			3000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Metals (Total)					6010B	µg/l																						
Arsenic			NS	900	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Iron			NS	NS																								
Manganese			NS	NS																								
Metals (Dissolved)					6010C	µg/l																						
Iron			NS	NS	NT																							

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO₃ per liter

Qualifying Notes:

- C+ The analyte found in associated method blank.
- C- The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

[illegible]

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO₃ per liter

Qualifying Notes:

- C- The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- K- The reported result is estimated.
- K+ The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

[illegible]

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- B- The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E- The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J+ The reported result is below the laboratory reporting limit and is estimated.
- J- The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120S	MW120S	MW120S	MW1120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120D	MW120S	MW120S	MW120S	MW1120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					5/1/14	4/3/15	4/28/16	4/18/17	4/4/18	4/16/19	4/17/20	4/14/21	4/13/22	4/18/23	4/3/24	8/22/07	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	
Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard																															
Volatile Organic Compounds (VOCs)																																			
Acetone	8260	µg/l	50000	50000	< 10	< 10	< 10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
Benzene			1000	10000	< 0.50	< 0.50	< 0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
Bromodichloromethane			6	50000	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
2-Butanone (MEK)			50000	50000	< 5.0	< 5.0	< 5.0	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
Carbon disulfide			NS	NS	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.56 J J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
Carbon tetrachloride			2	5000	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Chlorobenzene			200	1000	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Chloroethane			NS	NS	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		
Chloroform			50	20000	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.9 J+	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Chloromethane			NS	NS	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	10.3 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		
1,4-Dichlorobenzene			60	8000	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethane			2000	20000	16.2	16.2	11.6	11.4	12.8	3.1	16.0	12.0	3.8	1.7	1.6	1.1 J+	4.3	< 1.0	< 1.0	2.5	< 1.0	< 1.0	0.36 J	< 1.0	< 1.0	< 1.0	0.52 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
1,2-Dichloroethane			5	20000	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
1,1-Dichloroethylene			80	30000	16.7	16.8	8.2	9.7	14.1	1.3	14	10	1.6	1.6	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
cis-1,2-Dichloroethylene			20	50000	< 1.0	0.95 J	0.64 J	0.81 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
trans-1,2-Dichloroethylene			90	50000	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
1,2-Dichloropropane			3	50000	< 2.0	< 2.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0		
1,4-Dioxane			5000	50000	< 25	< 25	< 25	<130	<130	<130	<250	<250	<250	<250	<25	< 25	< 25	< 25	< 25	< 25	< 25	< 25 J+	< 25 J+	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25		
Ethylbenzene			20000	5000	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
2-Hexanone			NS	NS	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
4-Isopropyltoluene			NS	NS	< 5.0	< 5.0	< 5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
Methyl tert-butyl ether			50000	50000	0.78 J	1.1	< 1.0	1.1	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Methylene chloride			2000	50000	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		
Naphthalene			700	20000	< 5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
Tert-amyl methyl ether			NS	NS	< 2.0	< 2.0	< 2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0		
1,1,1,2-Tetrachloroethane			10	50000	< 5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
Tetrachloroethylene (PCE)			20	30000	66.4	52.9	40.4	35.2	49.9	7.7	59.0	36.0	6.5	5.2	4.7	< 1.0	< 1.0	0.97 J	< 1.0	< 1.0	0.71 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Tetrahydrofuran			NS	NS	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
Toluene			50000	40000	< 1.0	< 1.0	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
1,1,1-Trichloroethane (TCA)			4000	20000	1.7	2.1	1.1	0.45 J	1.1	<1.0	1.2	1.2	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
1,1,2-Trichloroethane			900	5000																															

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D			
					MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW120S	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D
					5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	5 to 20	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	
					4/4/18	4/16/19	4/17/20	4/14/21	4/13/22	4/18/23	4/2/24	10/22/07	1/15/08	4/17/08	7/14/08	7/14/08	10/22/08	10/22/08	1/12/09	1/12/09	4/13/09	4/13/09	7/14/09	7/14/09	10/14/09	4/12/10	4/20/11	4/16/12			
Analyte	Method	Units	Method 1 Standard	Method 1 Standard																											
Volatile Organic Compounds (VOCs)					8260	µg/l																									
Acetone			50000	50000	<10	<10	5.3	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 F+	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0 K-			
Benzene			1000	10000	<0.50	<0.50	<0.50	<0.5	<0.5	<0.5	<0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50			
Bromodichloromethane			6	50000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.3			
2-Butanone (MEK)			50000	50000	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
Carbon disulfide			NS	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
Carbon tetrachloride			2	5000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
Chlorobenzene			200	1000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
Chloroethane			NS	NS	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0			
Chloroform			50	20000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
Chloromethane			NS	NS	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0 J+	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0			
1,4-Dichlorobenzene			60	8000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
1,1-Dichloroethane			2000	20000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	46.3	55.3	46.6	37.2	38.1	36.1	34.2	38.2	38.3	37.2	38.1	37.6	37.9	54.8	52.9	65.8	67.7			
1,2-Dichloroethane			5	20000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
1,1-Dichloroethylene			80	30000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	13.2	< 1.0	16.7	12.8	12.6	12.9 G	8.4 G	14.0	14.2	14.1	14.2	11.0	10.4	21.8	18.0	24.1	25.5			
cis-1,2-Dichloroethylene			20	50000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	3.9	11.8	6.4	21.8	22.6	83.7 G	41.2 G	134	138	80.0	78.4	105	106	253	279	217	178			
trans-1,2-Dichloroethylene			90	50000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	0.70 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
1,2-Dichloropropane			3	50000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0			
1,4-Dioxane			5000	50000	<130	<130	<250	<250	<250	<250	<250	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25			
Ethylbenzene			20000	5000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
2-Hexanone			NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
4-Isopropyltoluene			NS	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
Methyl tert-butyl ether			50000	50000	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	3.0	3.8	2.4	2.1	2.0	5.6	5.6	1.8	1.8	1.7	1.9	1.4	< 1.0	0.94 J	2.0	1.7				
Methylene chloride			2000	50000	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0			
Naphthalene			700	20000	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
Tert-amyl methyl ether			NS	NS	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0			
1,1,1,2-Tetrachloroethane			10	50000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
Tetrachloroethylene (PCE)			20	30000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	182	258	177	157	154	148 G	97.7 G	112	114	121	118	140	139	115	119	219	356			
Tetrahydrofuran			NS	NS	<10	<10	<2.0	<2.0	<2.0	<2.0	<2.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10			
Toluene			50000	40000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.51 J	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
1,1,1-Trichloroethane (TCA)			4000	20000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	1.3	1.2	1.1	1.0	4.9	4.6	0.87 J	0.86 J	1.0	< 1.0	0.95 J	1.0	< 1.0	0.62 J	< 1.0	< 1.0			
1,1,2-Trichloroethane			900	50000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
Trichloroethylene (TCE)			5	5000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	59.6	136	68.8	71.0	72.0	48.3 G	69.0 G	36.5	36.3	62.3	70.7	76.3	76.5	146.0	96.3	233.0	342			
Vinyl chloride			2	50000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.39 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.32 J	0.31 J	< 1.0	< 1.0	0.56 J	0.52 J	< 1.0	< 1.0	7.4	15.2		
m,p-Xylene			3000	5000	<1.0	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
o-Xylene			3000	5000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
Total Xylene			3000	5000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0			
Metals (Total)					6010B	µg/l																									
Arsenic			NS	900																											
Iron			NS	NS																											
Manganese			NS	NS																											
Metals (Dissolved)																															

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "c" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO₃ per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	
					MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D	MW121D		
					32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1	32.1 to 47.1		
					11/12/12	4/23/13	11/18/13	4/30/14	11/18/14	4/2/15	11/19/15	4/28/16	11/21/16	4/17/17	11/8/17	4/3/18	11/15/18	4/15/19	11/22/19	4/16/20	11/18/20	4/13/21	11/30/21	4/13/22	11/29/22	4/18/23	
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard																							
Volatile Organic Compounds (VOCs)																											
Acetone	8260	µg/l	50000	50000	< 5.0 K-	< 10	< 10 K-	< 10	< 10	< 10	< 10	8.7 J	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5	
Benzene			1000	10000	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.5	
Bromodichloromethane			6	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
2-Butanone (MEK)			50000	50000	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 10	< 10	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5	
Carbon disulfide			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	
Carbon tetrachloride			2	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
Chlorobenzene			200	1000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
Chloroethane			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	
Chloroform			50	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
Chloromethane			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 G	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	
1,4-Dichlorobenzene			60	8000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
1,1-Dichloroethane			2000	20000	49.9	63.4	32.1	45.0	149.0	55.7	35.9	40.2	109.0	32.0	47.6	14.8	14.0	18.8	18.0	16	12	18	18	18	38	24	
1,2-Dichloroethane			5	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
1,1-Dichloroethylene			80	30000	17.6	22.3	12.7	17.6	59.7 K+	23.5	14.5	14.9	35.9	14.8	15.3	7.6	7.0	7.7	8.7	8.6	8.0	7.5	6.3	2.3	7.3	5.5	
cis-1,2-Dichloroethylene			20	50000	122	193	67.2	133	316	186	73.6	108	271	79.9	119	24.8	44.3	73.5	85.4	20	26	37	18	33	11	17	
trans-1,2-Dichloroethylene			90	50000	< 1.0	2.9	< 1.0	1.5	0.57 J K+	< 1.0	< 1.0	< 1.0	1.1	0.37 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
1,2-Dichloropropane			3	50000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
1,4-Dioxane			5000	50000	< 25	< 50	< 50	< 25 K-	< 25 K-	< 25	< 25	< 25	< 50	< 130	< 130	< 130	< 130	< 130	< 130	< 250	< 250	< 250	< 250	< 250	< 250	< 250	
Ethylbenzene			20000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
2-Hexanone			NS	NS	< 5.0	< 5.0	< 5.0 K-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5	< 5	
4-Isopropyltoluene			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	
Methyl tert-butyl ether			50000	50000	2.1	8.6 K-	2.7	2.3	7.1 K+	2.1	1.6	0.72 J	1.7	1.4	1.4	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 3.3	3.3	
Methylene chloride			2000	50000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	
Naphthalene			700	20000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	
Tert-amyl methyl ether			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	
1,1,1,2-Tetrachloroethane			10	50000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
Tetrachloroethylene (PCE)			20	30000	223	276	124	163	224	216	216	227	139	160	242	78	47.5	48.2	64.8	87	58	72	52	1.9	54	35	
Tetrahydrofuran			NS	NS	< 10 F- K-	< 10	< 10	< 10 G	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	
Toluene			50000	40000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
1,1,1-Trichloroethane (TCA)			4000	20000	< 1.0	< 1.0	< 1.0	0.53 J	0.44 J	1.4	0.56 J	1.1	< 1.0	0.45 J	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
1,1,2-Trichloroethane			900	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
Trichloroethylene (TCE)			5	5000	207	342	115	236	432	266	148	262	176	159	310	39.7	23.5	31.1	40.0	34	22	40	27	5	32.0	20.0	
Vinyl chloride			2	50000	8.5	10.2	3.4	9.5	38.4 G K-	15	7.5	18.2	23.3	6.6	10.4	< 1.0	6.1	9	4.5	< 1.0	2.0	1.5	1.0	31.0	3.0	8.6	
m,p-Xylene			3000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2	< 2	
o-Xylene			3000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
Total Xylene			3000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1	< 1	
Metals (Total)																											
Arsenic	6010B	µg/l	NS	900	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Iron			NS	NS																							
Manganese			NS	NS																							
Metals (Dissolved)																											
Iron	6010C	µg/l	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Others																											
Methane	8015	µg/l	NS	NS	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
Ethane	8015	µg/l	NS	NS																							
Ethylene	8015	µg/l	NS	NS																							
Alkalinity	E310.1	µg/l*	NS	NS																							
Chloride	E325.3	µg/l	NS	NS																							
Iron, Ferrous	3500FE B	µg/l	NS	NS																							
Nitrate & Nitrite as N	E353.2	µg/l	NS	NS																							

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO₃ per liter

Qualifying Notes:

- | | |
|----|---|
| C+ | The analyte found in associated method blank. |
| C+ | The result has a high bias due to surrogate recovery above upper control limits. |
| E | The value exceeds the calibration range. |
| F+ | The result has a high bias due to matrix spike recovery above upper control limits. |
| F- | The result has a low bias due to matrix spike recovery below lower control limits. |
| G | The result is estimated due to duplicate precision outside control limits. |
| J | The reported result is below the laboratory reporting limit and is estimated. |
| J- | The reported result is estimated. |
| K+ | The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits. |
| K+ | The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits. |
| R | The result is rejected due to gross exceedence of minimum response factor criteria. |

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

[illegible]

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "c" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO₃ per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	M
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General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. *c * = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

Sample Location:					MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW201	MW201	MW201	MW201	MW201	MW202	MW202	MW202	MW202	MW202	MW202	MW202	MW202	MW202
Sample Name:					MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW122	MW201	MW201	MW201	MW201	MW201	MW202	MW202	MW202	MW202	MW202	MW202	MW202	MW202	MW202
Well Screen Interval (ft bgs):					4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	4 to 16	11 to 21	11 to 21	11 to 21	11 to 21	11 to 21	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	10.5 to 20.5	
Sample Date:					11/18/2020	4/13/2021	11/30/2021	4/13/2022	11/29/2022	4/17/2023	11/7/2023	4/4/2024	11/14/2024	7/19/07	10/12/07	1/11/08	4/15/08	4/3/24	7/19/07	10/12/07	1/11/08	4/15/08	7/15/08	10/21/08	1/13/09	4/15/09	7/14/09	10/14/09
Collected By:					GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard																								
Volatile Organic Compounds (VOCs)					8260	µg/l																						
Acetone			50000	50000	<50	<25	<100	<100	<50	<50	<5.0	<10	< 50	NT	< 5.0 J+	< 5.0	< 5.0	<5.0	NT	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0
Benzene			1000	10000	<5.0	<2.5	<10	<10	<5	<5	<0.50	<1	< 5	NT	< 0.50	< 0.50	< 0.50	<0.5	NT	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 J+	< 0.50	< 0.50	< 0.50
Bromodichloromethane			6	50000	<10	<5.0	<20	<10	<10	<10	<10	<20	<10	NT	< 1.0	< 1.0	< 1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0	< 1.0
2-Butanone (MEK)			50000	50000	<50	<50	<100	<100	<50	<50	<5.0	<10	< 50	NT	< 5.0 J+	< 5.0	< 5.0	<5.0	NT	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon disulfide			NS	NS	<20	<5	<40	<40	<20	<20	<2.0	<40	< 20	NT	< 5.0	< 5.0	< 5.0	<2.0	NT	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon tetrachloride			2	5000	<10	<5	<20	<20	<10	<10	<1.0	<2.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0 J+	< 1.0	< 1.0	< 1.0
Chlorobenzene			200	1000	<10	<5.0	<20	<20	<10	<10	<1.0	<2.0	< 10	NT	< 1.0	< 1.0	< 1.0	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane			NS	NS	<20	<10	<40	<40	<20	<20	<2.0	<4.0	< 20	< 2.0	< 2.0	< 2.0	< 2.0	<2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chloroform			50	20000	<10	<10	<20	<20	<10	<10	<1.0	<2.0	< 10	NT	0.47 J	0.40 J	0.24 J	<1.0	NT	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane			NS	NS	<20	<10</																						

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "<" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- | | |
|----|---|
| C+ | The analyte found in associated method blank. |
| C | The result has a high bias due to surrogate recovery above upper control limits. |
| E | The value exceeds the calibration range. |
| F+ | The result has a high bias due to matrix spike recovery above upper control limits. |
| F- | The result has a low bias due to matrix spike recovery below lower control limits. |
| G | The result is estimated due to duplicate precision outside control limits. |
| J | The reported result is below the laboratory reporting limit and is estimated. |
| J+ | The reported result is estimated. |
| K- | The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits. |
| K+ | The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits. |
| R | The result is rejected due to gross exceedence of minimum response factor criteria. |

**Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts**

[illegible]

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
2. ft bgs = feet below ground surface.
3. µg/l = micrograms per liter.
4. "c" = The analyte was not detected at a concentration above the specified reporting.
5. SHA = Sanborn Head & Associates.
6. FD = Field Duplicate Sample.
7. NT = Not Tested.
8. * = micrograms CaCO3 per liter

Qualifying Notes:

- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					MW-3	MW-3	MW-3	MW-3	MW-3	MW-CS1	SH-1	SH-3	SH-4	SH-MW1	SH-MW-1	SH-MW-1	SH-MW1	SHMW1	SH-MW2	SH-MW2	SH-MW-2	SH-MW-2	SH-MW2	SHMW2	SH-MW2	SH-MW2	SH-MW2	SH-MW2	SH-MW2R	SH-MW3	SH-MW-3	SH-MW-3	
Unknown					Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	9 to 14	8 to 13	11 to 16	10 to 30	10 to 30	10 to 30	10 to 30	10 to 30	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 25	10 to 23	10 to 24	10 to 24		
10/21/08					10/21/08	1/14/09	4/14/09	7/15/09	10/16/09	5/23/07	8/9/04	8/9/04	5/25/06	7/8/02	5/23/06	10/4/06	1/16/07	4/12/07	7/8/02	8/16/04	5/23/06	10/4/06	1/16/07	4/16/07	7/19/07	4/28/17	4/4/18	4/16/19	4/3/24	7/8/02	5/23/06	10/4/06	
GEI					GEI	GEI	GEI	GEI	GEI	GEI	Geolnsight	Geolnsight	GEI	SHA	GEI	GEI	GEI	GEI	SHA	Geolnsight	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	SHA	GEI	GEI		
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard																													
Volatile Organic Compounds (VOCs)																																	
Acetone	8260	µg/l	50000	50000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 4000	< 2000	30.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 250	< 2000	< 5.0	< 5.0	< 5.0	< 10	NT	<10	<10	<10	<10	<100	< 2500	< 5.0	< 5.0
Benzene			1000	10000	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 200	< 100	< 0.50	< 250	< 0.50	0.61	< 0.50	0.33 J	< 25	< 100	< 0.50	< 0.50	< 0.50	< 1.0	NT	<0.50	<0.50	<0.50	<10	< 250	< 0.50	< 0.50	
Bromodichloromethane			6	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0	<20	< 250	< 1.0	< 1.0	
2-Butanone (MEK)			50000	50000	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 5.0	< 2000	< 1000	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 250	< 1000	< 5.0	< 5.0	< 5.0	< 10	NT	<10	<10	<10	<100	< 2500	< 5.0	< 5.0	
Carbon disulfide			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.54 J	< 1000	< 5.0	< 5.0	< 2500	< 5.0	< 5.0	< 5.0	< 5.0	< 250	< 5.0	< 5.0	< 5.0	< 10	NT	<2.0	<2.0	<2.0	<40	< 2500	< 5.0	< 5.0		
Carbon tetrachloride			2	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	<1.0	<1.0	<1.0	<20	< 250	< 1.0	< 1.0	
Chlorobenzene			200	1000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	0.52 J	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0	<20	< 250	< 1.0	< 1.0	
Chloroethane			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 400	< 200	< 2.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 200	< 2.0	< 2.0	< 4.0	< 2.0	<1.0	<1.0	<1.0	<1.0	<40	< 5.0	< 2.0	< 2.0	
Chloroform			50	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	13.3	< 380	2.1	4.6	1.7	3.4	< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0	<20	< 380	0.88 J	0.81 J	
Chloromethane			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 400	< 200	< 2.0	< 1200	< 2.0	< 2.0	< 2.0	< 2.0	< 120	< 200	< 2.0	< 2.0	< 4.0	NT	<1.0	<1.0	<1.0	<40	< 1200	< 2.0	< 2.0		
1,4-Dichlorobenzene			60	8000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 1200	< 1.0	< 1.0	< 1.0	< 1.0	< 120	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0	<20	< 1200	< 1.0	< 1.0	
1,1-Dichloroethane			2000	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	15.9	< 380	11.4	12.0	8.5	12.7	< 38	< 100	1.0	20.9	5.7	< 2.0	12.4	<1.0	<1.0	<1.0	<20	< 380	21.6	36.5	
1,2-Dichloroethane			5	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	103	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	<1.0	<1.0	<1.0	<20	< 250	< 1.0	< 1.0	
1,1-Dichloroethylene			80	30000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	556 E	< 250	11.7	19.3	9.0	24.4	< 25	< 100	10.1	45.0	9.8	2.1	23.8	0.65 J	<1.0	<1.0	<20	< 250	91.0	84.4	
cis-1,2-Dichloroethylene			20	50000	< 1.0	< 1.0	< 1.0	0.43 J	2.3 J+	< 1.0	< 200	< 100	16.6	< 250	2.1	7.3	11.2	2.7	< 25	< 100	3.9	45.7	14.7	1.4 J	26.1	1.7	2.3	3.1	<20	< 250	37.2	102	
trans-1,2-Dichloroethylene			90	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 380	< 1.0	< 1.0	< 1.0	< 1.0	< 38	< 100	< 1.0	< 1.0	< 2.0	< 1.0	<1.0	<1.0	<1.0	<20	< 380	< 1.0	1.1		
1,2-Dichloropropane			3	50000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 200	< 100	< 2.0	< 880	< 2.0	< 2.0	< 2.0	< 2.0	< 88	< 100	< 2.0	< 2.0	< 4.0	NT	<1.0	<1.0	<1.0	<20	< 880	< 2.0	< 2.0		
1,4-Dioxane			5000	50000	< 25	< 25	< 25	< 25	< 25	< 25	NT	NT	57700	NT	< 25	< 25 R	< 25	< 25	NT	NT	< 25	< 25 R	< 25	< 5.0	NT	<130	<130	<130	<5000	NT	< 25	< 25 R	
Ethylbenzene			20000	5000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 250	< 1.0	< 1.0	< 1.0	< 1.0	< 25	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0	<20	< 250	< 1.0	< 1.0	
2-Hexanone			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2000	< 1000	5.3	NT	< 5.0	< 5.0	< 5.0	< 5.0	NT	< 1000	< 5.0	< 5.0	< 5.0	< 10	NT	<5.0	<5.0	<5.0	<100	NT	< 5.0	< 5.0	
4-Isopropyltoluene			NS	NS	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200	< 100	< 5.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 100	< 5.0	< 5.0	< 5.0	< 10	NT	<2.0	<2.0	<2.0	<40	< 250	< 5.0	< 5.0	
Methyl tert-butyl ether			50000	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	66.4	< 200	< 100	< 1.0	< 5.0	< 1.0	0.71 J J+	< 1.0	0.74 J J+	< 5.0	< 100	< 1.0	8.7 J+	1.4	< 2.0	NT	<1.0	<1.0	<1.0	<40	< 5.0	5.1	8.2 J+	
Methylene chloride			2000	50000	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2000	< 1000	12.2	< 2500	< 2.0	< 2.0	< 2.0	< 2.0	< 250	< 1000	< 2.0	< 2.0	2.3 J	NT	<2.0	<2.0	<2.0	<40	< 2500	< 2.0	< 2.0		
Naphthalene			700	20000	< 5.0	< 5.0	< 5.0	< 5.0 J+	< 5.0	< 5.0	< 200	< 5.0	< 5.0	< 1200	< 5.0	< 5.0	< 5.0	< 5.0	< 120	< 100	< 5.0	< 5.0	< 5.0	< 10	NT	<5.0	<5.0	<5.0	<40	< 1200	< 5.0	< 5.0	
Tert-amyl methyl ether			NS	NS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0 J+	< 2.0	NT	NT	1.9 J	NT	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT	< 2.0	< 2.0	< 4.0	NT	<2.0	<2.0	<2.0	<40	NT	< 2.0	< 2.0		
1,1,1,2-Tetrachloroethane			10	50000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 200	< 100	40.4	< 250	< 5.0	< 5.0	< 5.0 F+	< 5.0	< 25	< 100	< 5.0	< 5.0	< 5.0 F+	< 10	NT	<1.0	<1.0	<1.0	<20	< 250	< 5.0	< 5.0	
Tetrachloroethylene (PCE)			20	30000	606	176	141	280	391	< 1.0	49700	19500	7240	21000	16200	28300	31700 F+	48900	2000	7170	1730	7190	2880 F+	726	3320	365	459	439	2500	26000	16900	28300	
Tetrahydrofuran			NS	NS	< 10	< 10	< 10	< 10	< 10	< 10	NT	NT	< 10	NT	< 10	< 10	< 10	< 10	NT	NT	< 10	< 10	< 10	< 20	NT	<10	<10	<10	<40	NT	< 10	< 10	
Toluene			50000	40000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	1.8	< 380	0.61 J	0.47 J	< 1.0	0.36 J	< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	NT	<1.0	<1.0	<1.0	<20	< 380	< 1.0	< 1.0	
1,1,1-Trichloroethane (TCA)			4000	20000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1150	2070	7610	< 250	34.5	69.7 J+	31.4	27.9 J+	660	1550	158	1330	360	44.1	539	6.8	7.9	14.8	<20	1200	989	1680	
1,1,2-Trichloroethane			900	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	172	< 380	< 1.0	< 1.0	< 1.0	< 1.0	< 38	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1.0	<1.0	<1.0	<1.0	<20	< 380	< 1.0	< 1.0	
Trichloroethylene (TCE)			5	5000	4.2	1.3	1.3	2.7	3.6	< 1.0	906	1440	7580	< 5.0	141	317	141	159	190	572	92.8	486	171	26.5	354	13.2	14.8	16.7	42	870	482	1030	
Vinyl chloride			2	50000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 200	< 100	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	0.55 J	< 5.0	< 100	< 1.0	< 1.0	< 1.0	< 2.0	< 1								

Table 4-2. Chemical Testing Results - GEI Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:					SH-MW3	SHMW3	SHMW3	SHMW3	SHMW3	SH-MW3	SH-MW3	SH-MW3	SH-MW3	SH-MW3	COBBLE-IR-1
					SH-MW3	SHMW3	SHMW3	SHMW3	SHMW3	SH-MW3	SH-MW3	SH-MW3	SH-MW3	SH-MW3	COBBLE-IR-1
					10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	10 to 24	Unknown
					1/17/07	4/12/07	4/15/08	4/13/10	4/21/11	4/16/12	4/23/13	4/30/14	4/2/15	6/25/07	GEI
Analyte	Method	Units	Method 1 GW-2 Standard	Method 1 GW-3 Standard											
Volatile Organic Compounds (VOCs)	8260	µg/l													
Acetone			50000	50000	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 500	< 10	< 500	5.8	
Benzene			1000	10000	< 50	< 0.50	< 500	< 0.50	< 50	< 25	< 25	< 0.50	< 25	< 0.50	
Bromodichloromethane			6	50000	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	0.32 J	
2-Butanone (MEK)			50000	50000	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0	
Carbon disulfide			NS	NS	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0	
Carbon tetrachloride			2	5000	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
Chlorobenzene			200	1000	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
Chloroethane			NS	NS	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0	
Chloroform			50	20000	< 100	1.1	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	5.6	
Chloromethane			NS	NS	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0	
1,4-Dichlorobenzene			60	8000	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
1,1-Dichloroethane			2000	20000	< 100	24.5	< 100	19.5	< 100	< 50	< 50	12.6	24.0 J	< 1.0	
1,2-Dichloroethane			5	20000	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
1,1-Dichloroethylene			80	30000	< 100	91.3	< 100	14.2	< 100	< 50	< 50	12.5	< 50	< 1.0	
cis-1,2-Dichloroethylene			20	50000	< 100	39.8	34.5 J	19.8	< 100	< 50	< 50	40.1	27.7 J	< 1.0	
trans-1,2-Dichloroethylene			90	50000	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
1,2-Dichloropropane			3	50000	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0	
1,4-Dioxane			5000	50000	< 2500	< 25	< 2500	< 25	< 2500	< 1300	< 2600	< 25 K-	< 1300	< 25	
Ethylbenzene			20000	5000	180	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
2-Hexanone			NS	NS	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0	
4-Isopropyltoluene			NS	NS	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0	
Methyl tert-butyl ether			50000	50000	< 100	2.4 J+	< 100	0.83 J	< 100	< 50	< 50 K-	< 1.0	< 50	< 1.0	
Methylene chloride			2000	50000	< 200	< 2.0	< 200	< 2.0	450	< 100	< 100	< 2.0	< 100	< 2.0	
Naphthalene			700	20000	392 J	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 250	< 5.0	
Tert-amyl methyl ether			NS	NS	< 200	< 2.0	< 200	< 2.0	< 200	< 100	< 100	< 2.0	< 100	< 2.0	
1,1,1,2-Tetrachloroethane			10	50000	< 500	< 5.0	< 500	< 5.0	< 500	< 250	< 250	< 5.0	< 50	< 5.0	
Tetrachloroethylene (PCE)			20	30000	29700	34000	15200	20300	16900	7310	9650	14500	12800	< 1.0	
Tetrahydrofuran			NS	NS	< 1000	< 10	< 1000	< 10	< 1000	< 500	< 500	< 10 G	< 500	< 10	
Toluene			50000	40000	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
1,1,1-Trichloroethane (TCA)			4000	20000	806	621 E J+	119	19.8 J	< 100	83.0	< 50	48.0	49.9 J	< 1.0	
1,1,2-Trichloroethane			900	50000	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
Trichloroethylene (TCE)			5	5000	709	1030	306	383.0	342	152	157	231	218	< 1.0	
Vinyl chloride			2	50000	< 100	0.83 J	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
m,p-Xylene			3000	5000	484	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
o-Xylene			3000	5000	< 100	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
Total Xylene			3000	5000	543	< 1.0	< 100	< 1.0	< 100	< 50	< 50	< 1.0	< 50	< 1.0	
Metals (Total)	6010B	µg/l				NT	NT	NT	NT	NT	NT	NT	NT	NT	
Arsenic			NS	900	< 10										
Iron			NS	NS	255										
Manganese			NS	NS	NT										
Metals (Dissolved)	6010C	µg/l				NT	NT	NT	NT	NT	NT	NT	NT	NT	
Iron			NS	NS											
Others						NT	NT	NT	NT	NT	NT	NT	NT	NT	
Methane	8015	µg/l	NS	NS	< 10										
Ethane	8015	µg/l	NS	NS	< 10										
Ethylene	8015	µg/l	NS	NS	< 10										
Alkalinity	E310.1	µg/l*	NS	NS	208000										
Chloride	E325.3	µg/l	NS	NS	362000										
Iron, Ferrous	3500FE B	µg/l	NS	NS	NT										
Nitrate & Nitrite as N	E353.2	µg/l	NS	NS	1900										
Nitrogen, Nitrate	E353.2	µg/l	NS	NS	1900										
Nitrogen, Nitrite	E354.1	µg/l	NS	NS	30										
Sodium	6010C	µg/l	NS	NS	NT										
Sulfate	E375.4	µg/l	NS	NS	62600										
Surfactants	E425.1	µg/l	NS	NS	< 100										
Total Organic Carbon	E415.1	µg/l	NS	NS	< 1000										

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
 2. ft bgs = feet below ground surface.
 3. µg/l = micrograms per liter.
 4. "<" = The analyte was not detected at a concentration above the specified reporting.
 5. SHA = Sanborn Head & Associates.
 6. FD = Field Duplicate Sample.
 7. NT = Not Tested.
 8. * = micrograms CaCO3 per liter

- Qualifying Notes:**
- B The analyte found in associated method blank.
- C+ The result has a high bias due to surrogate recovery above upper control limits.
- E The value exceeds the calibration range.
- F+ The result has a high bias due to matrix spike recovery above upper control limits.
- F- The result has a low bias due to matrix spike recovery below lower control limits.
- G The result is estimated due to duplicate precision outside control limits.
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.
- K- The result has a low bias due to blank spike or laboratory control sample recovery below lower control limits.
- K+ The result has a high bias due to blank spike or laboratory control sample recovery above upper control limits.
- R The result is rejected due to gross exceedence of minimum response factor criteria.

Table 4-3. Chemical Testing Results - GLX Groundwater Sampling
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Well Screen Interval (ft bgs): Sample Date: Collected By:			KE-114		KE-115		KE-116		KE-117			MW-5R	WashSW ^(b)	KE-202D	KE-202S	KE-204	KE-205	KE-206	KE-207	KE-208	KE209	KE-210	GLC-WASH-MW-4	GLC-WASH-MW-2
			KE-114	KE-114	KE-115	KE-115	KE-116	KE-116	KE-117	KE-117 ^(a)	KE-117	MW-5R	WashSW ^(b)	KE-202D	KE-202S	KE-204	KE-205	KE-206	KE-207	KE-208	KE209	KE-210	GLC-WASH-MW-4-082520	GLC-WASH-MW-2-082520
			5 to 30	5 to 30	5 to 30	5 to 30	5 to 30	5 to 30	5 to 20	5 to 20	5 to 20	5 to 30	Vac-Ex	~25 to 35	5 to 20	15 to 25	9.5 to 19.5	10 to 21	8 to 18	4 to 14	9 to 19	8.5 to 18.5	15-30	15-30
			9/27/12	2/6/14	9/27/12	2/6/14	9/27/12	2/6/14	9/27/12	2/6/14	4/9/14	2/6/14	2/6/14	4/8/14	4/8/14	4/14/14	4/15/14	4/14/14	4/15/14	4/14/14	4/15/14	4/15/14	8/25/20	8/25/20
			Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	TRC	TRC
Analyte	Method	Units																						
Volatile Organic Compounds (VOCs)	SW-846 8260C	µg/l																						
Acetone			< 10	< 10	< 10	< 10	< 10	< 10	56	< 10	< 20	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	NT	NT
Benzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	3.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT
Carbon disulfide			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	73	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NT	NT
1,1-Dichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	12	< 1.0	< 1.0	4.4	< 1.0	< 1.0	3.4	< 1.0	6.0	< 1.0	< 1.0	< 1.0	1000	NT	NT
1,1-Dichloroethylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	8.0	< 1.0	< 1.0	1.8	< 1.0	< 1.0	2.6	< 1.0	4.6	< 1.0	< 1.0	< 1.0	790	NT	NT
cis-1,2-Dichloroethylene			< 1.0	< 1.0	1.8	1.0	< 1.0	< 1.0	< 5.0	410	2.8	< 1.0	26	12	< 0.40	83	< 1.0	89	< 1.0	1.2	< 1.0	8.4	<1.0	<1.0
Ethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	7.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT
Methyl tert-butyl ether			< 1.0	< 1.0	1.4	2.4	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	71	NT	NT
Tetrachloroethylene (PCE)			< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	760	4.3	< 1.0	2000	33	< 1.0	14000	1.0	12000	2.5	73	< 1.0	14000	11	11
Tetrahydrofuran			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	3.3	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT
Toluene			< 1.0	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	2.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT
1,1,1-Trichloroethane (TCA)			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	11	< 1.0	< 1.0	13	< 1.0	< 1.0	16	< 1.0	35.0	< 1.0	< 1.0	< 1.0	860	NT	NT
1,1,2-Trichloroethane			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.8	NT	NT
Trichloroethylene (TCE)			< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 5.0	150	1.2	< 1.0	38	5.0	< 1.0	81.0	< 1.0	86.0	< 1.0	2.0	< 1.0	24000	1.6	<1.0
1,2,4-Trimethylbenzene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	NT	NT
Vinyl chloride			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	19	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.6	<1.0	<1.0
m,p-Xylene			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 2.0	< 2.0	37	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT
o-Xylene			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0	< 2.0	< 1.0	19	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	NT	NT

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes refer to the laboratory data reports.
 2. ft bgs = feet below ground surface.
 3. µg/l = micrograms per liter.
 4. "<" = The analyte was not detected at a concentration above the specified reporting limit.

- Footnote:**
- (a) The groundwater sample from KE-117 on February 6, 2014 was collected during overpumping of the well to simulate construction dewatering conditions and was not collected via low flow sampling techniques.
- (b) WashSW was a grab sample collected from the base of an open excavation within Washington Street.

Table 4-4 Chemical Testing Results - 31 Tufts Street Soil Vapor
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

				31 Tufts Street					
				31TUFT-SV1			31TUFT-SV2		
				10/17/2023	1/31/2024	9/6/2024	10/27/2023	1/31/2024	9/6/2024
				GEI	GEI	GEI	GEI	GEI	GEI
	Method	Units	Residential Sub-Slab Screening Values						
Volatile Organic Compounds (VOCs)	TO-15 SIM	µg/m ³							
1,1-Dichloroethane			56	<0.162	<0.081	0.356	<0.081	<0.081	0.546
1,1-Dichloroethene			56	<0.159	<0.079	0.174	<0.079	<0.079	<0.079
cis-1,2-Dichloroethene			56	<0.159	<0.079	<0.079	<0.079	0.270	0.083
trans-1,2-Dichloroethene			56	<0.159	<0.079	0.083	0.119	<0.079	<0.079
Tetrachloroethene			98	58.7	31.5	94.9	59.1	77.3	61.4
1,1,2,2-Tetrachloroethane			2.8	<0.275	<0.137	<0.137	1.4	<0.137	<0.137
1,1,1-Trichloroethane			210	2.87	0.786	7.47	8.95	9.82	14.60
Trichloroethene			28	1.38	<0.107	2.09	2.41	2.42	4.58

General Notes

1. Analytes detected above the laboratory reporting limit are reported here. For a complete list of analytes see the laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. Residential Screening Values are cited from "Vapor Intrusion Guidance WSC#16-435" from the Massachusetts Department of Environmental Protection dated October 2016.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit
5. Results highlighted are the most recent samples collected.

Table 4-5 Chemical Testing Results - 10 Morton Street Soil Vapor
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Sample Date: Collected by: Units:			Pre-Renovation 10 Morton Street																								Post-Renovation 10 Morton Street					
			10Mort- SG1 5/9/2007 GEI		10MORT-SV1 3/8/2023 GEI		10MORT-SV2 GEI		10MORT-SV3 3/8/2023 GEI		10MORT-SV4 3/8/2023 GEI		10MORT-SV1 3/31/2023 GEI		10MORT-SV2 3/31/2023 GEI		10MORT-SV3 3/31/2023 GEI		10MORT-SV4 3/31/2023 GEI		10MORT-SV1 4/24/2023 GEI		10MORT-SV2 4/24/2023 GEI		10MORT-SV3 4/24/2023 GEI		10MORT-SV4 4/24/2023 GEI		10MORT-SV5 10/9/2024 GEI		10MORT-SV6 10/9/2024 GEI	
			µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
			Analyte	Method	Residential Sub-Slab Soil Gas Screening Values (µg/m³)																											
Volatile Organic Compounds (VOCs)		TO-15																														
cis-1,2-Dirchloroethylene (cis-1,2-DCE)		56	<0.79	<0.20	0.083	0.021	0.115	0.029	<0.079	<0.020	<0.079	<0.020	<0.40	<0.10	<0.40	<0.10	<0.40	<0.10	<0.40	<0.10	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	0.153	0.039	0.107	0.027
trans-1,2-Dirchloroethylene (trans-1,2-DCE)		56	<0.79	<0.20	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.40	<0.10	<0.40	<0.10	<0.40	<0.10	<0.40	<0.10	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	336	84.7	291	63.0
Tetrachloroethylene (PCE)		98	4.0	0.59	1.06	0.156	1.32	0.194	0.183	0.027	0.292	0.043	<0.68	<0.10	<0.68	<0.10	<0.68	<0.10	<0.68	<0.10	0.353	0.052	0.407	0.060	1.22	0.180	0.285	0.042	12.6	1.86	16.3	2.40
1,1,1-Trichloroethane		210	1.2	0.22	<0.109	<0.020	<0.109	<0.020	<0.109	<0.020	<0.109	<0.020	<0.55	<0.10	<0.55	<0.10	<0.55	<0.10	<0.55	<0.10	<0.109	<0.020	<0.109	<0.020	<0.109	<0.020	<0.109	<0.020	<0.201	<0.037	<0.109	<0.020
Trichloroethylene (TCE)		28	<1.1	<0.20	<0.107	<0.020	0.258	0.048	<0.107	<0.020	<0.107	<0.020	<0.54	<0.10	<0.54	<0.10	<0.54	<0.10	<0.54	<0.10	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020	0.228	0.042	<0.107	<0.020

- General Notes**
- Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 - µg/m³ = micrograms per cubic meter.
 - ppbv = parts per billion by volume.
 - Residential Screening Values are cited from "Vapor Intrusion Guidance WSC#16-435" from the Massachusetts Department of Environmental Protection dated October 2016.
 - < = The analyte was not detected at a concentration above the specified laboratory reporting limit
 - Results highlighted are the most recent samples collected.

Table 4-6 Chemical Testing Results - 103 Washington Street Soil Vapor
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

				103 Washington Street															
				103Wash-SV1								103Wash-SV2							
				5/10/2023		7/6/2023		3/5/2024		12/4/2024		5/10/2023		7/6/2023		3/5/2024		12/4/2024	
				µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	Method	Residential Sub-Slab Soil Gas Screening Values (µg/m³)	Commercial Sub-Slab Soil Gas Screening Values (µg/m³)																
Volatile Organic Compounds (VOCs)	TO-15																		
1,1-Dichloroethane		56	50000	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	0.125	0.031
1,1-Dichloroethylene		56	12000	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	0.107	0.027	<0.079	<0.020	<0.079	<0.020
cis-1,2-Dichloroethylene		56	370	1.95	0.493	2.32	0.585	<0.079	<0.020	<0.079	<0.020	9.48	2.39	19.2	4.83	12.2	3.07	6.94	1.75
trans-1,2-Dichloroethylene		56	3700	1.17	0.295	2.39	0.603	<0.079	<0.020	<0.079	<0.020	6.66	1.68	7.41	1.87	2.24	0.565	1.38	0.347
Tetrachloroethylene (PCE)		98	290	28.5	4.21	51.5	7.60	0.210	0.031	2.87	0.423	189	27.9	188	27.7	40.9	6.0	60.7	8.95
1,1,1-Trichloroethane		210	310000	<0.109	<0.020	0.115	0.021	<0.109	<0.020	0.115	0.021	0.175	0.032	0.278	0.051	<0.109	<0.020	0.218	0.040
Trichloroethylene (TCE)		28	120	9.46	1.76	15.7	2.92	<0.107	<0.020	0.333	0.062	98.3	18.3	130	24.1	37.6	7.00	28.9	5.37

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. Results highlighted are the most recent samples collected.

Table 4-7 Chemical Testing Results - 105 Washington Street Soil Vapor
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

				105 Washington Street											
				105Wash-SV1		105Wash-SV2		105Wash-SV2		105Wash-SV2		105Wash-SV2		105Wash-SV2	
				8/4/2021		8/4/2021		3/15/2022		2/15/2023		5/10/2023		12/4/2024	
				Units:											
Analyte	Method	Residential Sub-Slab Soil Gas Screening Values (µg/m³)	Commercial Sub-Slab Soil Gas Screening Values (µg/m³)	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Volatile Organic Compounds (VOCs)	TO-15														
cis-1,2-Dichloroethylene		56	370	<0.793	<0.200	<0.793	<0.200	<0.793	<0.200	<0.079	<0.020	<0.079	<0.020	0.091	0.023
Tetrachloroethylene (PCE)		98	290	132	19.5	110	16.2	4.69	0.691	0.658	0.097	1.86	0.274	1.20	0.177
1,1,2-Trichloroethane		10	50	<1.09	<0.200	<1.09	<0.200	<1.09	<0.200	<0.109	<0.020	<0.109	<0.020	0.115	0.021
Trichloroethylene (TCE)		28	120	8.44	1.57	8.97	1.67	<1.07	<0.200	<0.107	<0.020	0.215	0.04	0.263	0.049

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. Results highlighted are the most recent samples collected.

Table 4-8 Chemical Testing Results - 31 Tufts Street Indoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location:				31 Tufts Street													
				Sample Name:			31TUFT-IA1			31TUFT-IA2			31TUFT-IA3			31TUFT-IA4	31TUFT-IA5
							Location:			Unit 104			Unit 101			Utility Room	
				Sample Date:			10/17/2023	1/31/2024	9/6/2024	10/17/2023	1/31/2024	9/6/2024	10/17/2023	1/31/2024	9/6/2024	9/6/2024	9/6/2024
				Collected By:			GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	Method	Units	Residential Indoor Air Threshold Values														
Volatile Organic Compounds (VOCs)				TO-15	µg/m³												
1,1-Dichloroethane						0.8	<0.081	<0.081	0.134	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081		
trans-1,2-Dichloroethene						0.8	<0.079	0.103	0.139	<0.079	<0.079	0.139	<0.079	0.147	0.119		
Tetrachloroethene						1.4	<0.136	<0.136	0.604	0.203	<0.136	<0.136	0.176	<0.136	0.210		

General Notes

1. Analytes detected above the laboratory reporting limit are reported here. For a complete list of analytes see the laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. Residential Threshold Values are cited from "Vapor Intrusion Guidance WSC#16-435" from the Massachusetts Department of Environmental Protection dated October 2016.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit
5. Results highlighted are the most recent samples collected.

Table 4-9 Chemical Testing Results - 103 Washington Street Indoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Sample Date: Units:				First Floor								Basement						Unit 1		Unit 3	
				103Wash-F1 5/10/23		103Wash-F1 7/6/23		103Wash-F1 3/5/24		103Wash-F1 12/4/24		103Wash-B1 7/6/23		103Wash-B1 3/5/24		103Wash-B1 12/4/24		103Wash-UNIT1 12/4/24		103Wash-UNIT3 12/4/24	
				µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv
Analyte	Method	MassDEP Residential Indoor Air Threshold Values (µg/m³)	MassDEP Commerical Indoor Air Threshold Values (µg/m³)																		
Volatile Organic Compounds (VOCs)	TO-15																				
cis-1,2,-Dichloroethylene		0.8	5.3	<0.079	<0.020	0.107	0.027	<0.079	<0.020	<0.079	<0.020	0.599	0.151	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020
trans-1,2-Dichloroethylene		0.8	53	0.194	0.049	0.852	0.215	<0.079	<0.020	<0.079	<0.020	6.50	1.64	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020
Tetrachloroethylene (PCE)		1.4	4.1	0.278	0.041	0.692	0.102	<0.136	<0.020	0.251	0.037	2.28	0.336	0.325	0.048	0.888	0.131	0.176	0.026	0.264	0.039
Trichloroethylene (TCE)		0.4	1.8	<0.107	<0.020	0.204	0.038	<0.107	<0.020	<0.107	<0.020	0.919	0.171	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020

- General Notes:**
- 1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 - 2. µg/m³ = micrograms per cubic meter.
 - 3. ppbv = parts per billion by volume.
 - 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 - 5. Results highlighted are the most recent samples collected.
 - 6. A sample was not collected from the basement in May 2023 due to fresh air introduction during construction acivities.

Table 4-10 Chemical Testing Results - 105 Washington Street Indoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Sample Date: Units:				Basement														First Floor								Second Floor		
				105WASH-B1 3/15/22		105WASH-B2 3/15/22		105WASH-B1 2/15/23		105WASH-B1 5/10/23		105WASH-B2 5/10/23		105WASH-B1 12/4/24		105WASH-B2 12/4/24		105WASH-FF1 3/15/22		105WASH-FF1 2/15/23		105WASH-FF1 5/10/23		105WASH-F1 12/4/24		105WASH-F2 12/4/24		
				µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³
Analyte	Method	MassDEP Residential Indoor Air Threshold Values (µg/m³)	MassDEP Commerical Indoor Air Threshold Values (µg/m³)																									
Volatile Organic Compounds (VOCs)		TO-15																										
1,1-Dichloroethane			0.8	710	0.247	0.061	0.113	0.028	<0.081	<0.020	0.174	0.043	0.101	0.025	<0.081	<0.020	<0.081	<0.020	0.267	0.066	0.138	0.034	0.121	0.03	<0.081	<0.020	<0.081	<0.020
Tetrachloroethylene (PCE)			1.4	4.1	1.15	0.169	0.57	0.084	0.549	0.081	0.841	0.124	0.536	0.079	1.37	0.202	0.312	0.046	1.05	0.155	1.38	0.203	0.373	0.055	1.40	0.206	0.400	0.059
Trichloroethylene (TCE)			0.4	1.8	0.247	0.027	<0.107	<0.020	<0.107	<0.020	0.129	0.024	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020	0.14	0.026	<0.107	<0.020	<0.107	<0.020	0.107	0.020	<0.107	<0.020

- General Notes:**
- Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 - µg/m³ = micrograms per cubic meter.
 - ppbv = parts per billion by volume.
 - "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 - Results highlighted are the most recent samples collected.

Table 4-11. Summary of Meteorological Data During Air Sampling Events
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location	Sample Date	Sample Location	Outside Temperature (°F) ^{1,3}		Outside Barometric Pressure (in. Hg) ^{2,4}		Prevailing Wind Direction		General Weather Conditions		Significant precipitation within 12 hours prior to Sampling?
			Start	End	Start	End	Start	End	Start	End	
Residences											
31 Tufts Street	9/5/2024-9/6/2024	IA1	73	70	30.41	30.17	SE	E	Sunny	Cloudy	No
		IA2									
		IA3									
		IA4									
		IA5									
	9/6/2024	SV1	70	73	30.13	WSW	Cloudy	Mostly Cloudy	No		
		SV2									
10 Morton Street	10/9/2024	SV5	48	51	29.89	W	Partly Cloudy	Sunny	No		
		SV6									
103 Washington Street	12/3/2024-12/4/2024	F1	30	28	30.19	30.21	E	Cloudy	Sunny	No	
		B1									29
		Unit 1									
		Unit 2									
	12/4/2024	SV1	30	34	30.20	E	Sunny				
		SV2									
105 Washington Street	12/3/2024-12/4/2024	F1	31	29	30.20	30.20	E	E	Cloudy	Sunny	No
		F2									
		B1									
		B2									
	12/4/2024	SV1	34	36	30.20	30.16	NE		Sunny		No

General Notes:

1. °F = degrees Fahrenheit.
2. in. Hg = inches of mercury.
3. Temperatures were measured in the field using a hand-held thermometer.
4. Barometric pressures were measured in the field with a digital barometer.

Table 5-1. Summary of SSDS Monitoring Events - Capuano Center
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
 50 Tufts Street
 Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured	Analytical Samples Collected (Yes/No)?
7/11/2024	1	SSDS Quarterly Monitoring	-Pressure readings, VOC concentrations, and flow rate at each manifold pipe. -Pressure readings, VOC concentrations, and flow rate at all the exterior extraction pipes.	No
10/9/2024	2	SSDS Quarterly Monitoring	-Pressure readings, VOC concentrations, and flow rate at each manifold pipe. -Pressure readings, VOC concentrations, and flow rate at all the exterior extraction pipes.	No

General Notes:

1. SSDS = Sub-Slab Depressurization System.
2. RMR = Remedial Monitoring Report.
3. VOC = Volatile Organic Compound.
4. VOC measurements collected with a ppm-RAE calibrated to 100 parts per million (ppm) isobutylene.
5. Pressure readings collected using a Dwyer 475-000-FM manometer.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Cafetorium		Room 101				Room 108				Room 121		Room 122						Room 125				Room 126					
		150 GLEN-CAF		150 GLEN-ROOM 101A		150 GLEN-ROOM 101B		150 GLEN-ROOM 108A		150 GLEN-ROOM 108B		150 GLEN-ROOM 121		150 GLEN-ROOM 122		150 GLEN-RM 122		150 GLEN-RM 122		150 GLEN-ROOM 125A		150 GLEN-ROOM 125B		150 GLEN-ROOM 126		150 GLEN-ROOM 100 (FD-Room 126)		150 GLEN-RM 126	
		1/6/07		12/27/06		12/28/06		12/27/06		12/28/06		1/6/07		1/6/07		2/7/07		5/23/15		12/27/06		12/28/06		1/13/07		1/13/07		2/7/07	
Sample Date:		Units:		µg/m ³		ppbv		µg/m ³		ppbv		µg/m ³		ppbv		µg/m ³		ppbv		µg/m ³		ppbv		µg/m ³		ppbv		µg/m ³	
Analyte	Method	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv
Volatile Organic Compounds (VOCs)		TO-15																											
Carbon tetrachloride		0.49 J J+	0.078 J J+	< 1.3	< 0.20	< 1.3	< 0.20	0.94 J	0.15 J	< 1.3	< 0.20	0.52 J J+	0.082 J J+	0.51 J	0.081 J J+	0.69 J	0.11 J	NT	NT	1.0 J	0.16 J	< 1.3	< 0.20	0.69 J	0.11 J	0.63 J	0.10 J	0.94 J	0.15 J
Dichloroethane, 1,1,-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane, 1,2,-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene, 1,1,-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2,-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane, 1,1,2,2,-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		0.88 J J+	0.13 J J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	0.88 J	0.13 J	0.75 J	0.11 J	< 1.4	< 0.20
Trichloroethane, 1,1,1,- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 7. NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 126 (continued)																											
		150GLEN-ROOM 126		150 GLEN-ROOM 126		150 GLEN-RM 126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126	
		3/8/07		4/20/07		5/17/07		7/30/07		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/172008		4/21/08	
Sample Date:		Units:																											
Analyte	Method	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Volatile Organic Compounds (VOCs)		TO-15																											
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.60 J	0.095 J	0.69 J	0.11 J	0.82 J	0.13 J	< 1.3	< 0.20	0.69 J	0.11 J	0.59 J	0.093 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1,-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2,-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1,-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2,-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2,-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1,- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 126 (continued)																		Room 134						Room 136		Room 137			
		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150GLEN-RM126		150 GLEN-ROOM 134		150 GLEN-RM 134		150 GLEN-RM 134		150 GLEN-ROOM 136		150 GLEN-ROOM 137A		150 GLEN-ROOM 137B			
		8/18/08		11/24/08		3/2/09		8/27/09		11/11/09		2/19/10		11/11/10		3/17/11		5/23/15		1/13/07		2/7/07		5/23/15		1/13/07		1/6/07		1/6/07	
Sample Date:		Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	Method																														
Volatile Organic Compounds (VOCs)		TO-15																													
Carbon tetrachloride		0.60 J	0.096 J	0.60 J	0.096 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	0.75 J	0.12 J	0.94 J	0.15 J	NT	NT	0.69 J	0.11 J	0.52 J J+	0.082 J J+	< 1.3	< 0.20
Dichloroethane, 1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane, 1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene, 1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane, 1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.2 J	0.18 J	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 1.4	< 0.20	3.2	0.47	< 1.4	< 0.20	< 1.4	< 0.20	2.1	0.31	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane, 1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 1.1	< 0.20	0.54 J	0.10 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 138																											
		RM138		150 GLEN-ROOM 138		150 GLEN-ROOM 138		150 GLEN-ROOM 138		150 GLEN-ROOM 138 (Alpha duplicate)		150 GLEN-RM 138		150 GLEN-RM 139 (FD-Room 138)		150GLEN-ROOM 138		150GLEN-ROOM 139 (FD-Room 138)		150 GLEN-ROOM 138		150GLEN-ROOM 139 (FD-Room 138)		150 GLEN-RM 138		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM138	
		1/2/07		1/6/07		1/13/07		1/26/07		1/26/07		2/7/07		2/7/07		3/8/07		3/8/07		4/20/07		4/20/07		5/17/07		5/17/07		7/30/07	
Sample Date:		Units:																											
Analyte	Method	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Volatile Organic Compounds (VOCs)		TO-15																											
Carbon tetrachloride		< 1.3	< 0.20	0.49 J J+	0.078 J J+	0.82 J	0.13 J	0.82 J	0.13 J	< 0.126	< 0.020	0.75 J	0.12 J	0.52 J	0.082 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.61 J	0.097 J
Dichloroethane,1,1,-		0.45 J	0.11 J	0.77 J J+	0.19 J J+	0.57 J	0.14 J	0.65 J	0.16 J	< 0.081	< 0.020	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2,-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.079	< 0.020	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1,-		< 0.79	< 0.20	2.1 J+	0.54 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.079	< 0.020	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2,-		< 0.79	< 0.20	0.83 J+	0.21 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.079	< 0.020	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2,-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4 J+	< 0.20 J+
Tetrachloroethylene (PCE)		14	2.0	60 J+	8.8 J+	20	3.0	20	3.0	32.6	4.8	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1,- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.109	< 0.020	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		2.3	0.42	7 J+	1.3 J+	3.1	0.57	3.3	0.61	4.26	0.794	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 7. NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 138 (continued)																													
		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM138		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM239 (FD-Room 138)		150GLEN-RM238 (FD-Room 138)		150GLEN-ROOM 139 (FD-Room 138)		150GLEN-RM238 (FD-Room 138)		150GLEN-RM239 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138					
Sample Date: Units:		7/30/07		9/10/07		9/10/07		10/8/07		10/8/07		10/8/07		10/8/07		10/14/07		10/14/07		10/14/07		10/14/07		11/15/07		11/15/07		12/13/07			
		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv		
Analyte		Method																													
Volatile Organic Compounds (VOCs)		TO-15																													
Carbon tetrachloride																															
Dichloroethane, 1,1-																															
Dichloroethane, 1,2-																															
Dichloroethene, 1,1-																															
Dichloroethylene, cis-1,2-																															
Tetrachloroethane, 1,1,2,2-																															
Tetrachloroethylene (PCE)																															
Trichloroethane, 1,1,1- (TCA)																															
Trichloroethylene (TCE)																															

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 138 (continued)																													
		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138			
Sample Date: Units:		12/13/07		1/21/08		1/21/08		2/19/08		2/19/08		2/22/08		2/22/08		3/17/08		3/17/08		4/21/08		4/21/08		8/18/08		8/18/08		11/24/08			
		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv		
Analyte		Method																													
Volatile Organic Compounds (VOCs)		TO-15																													
Carbon tetrachloride				< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.75 J	0.12 J	0.69 J	0.11 J	0.69 J	0.11 J	0.63 J	0.10 J	0.62 J	0.098 J
Dichloroethane, 1,1-				< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane, 1,2-				< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene, 1,1-				< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-				< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane, 1,1,2,2-				< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)				< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.8	0.27	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane, 1,1,1- (TCA)				< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)				< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 7. NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:			Room 138 (continued)																													
			150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD-Room 138)		150GLEN-RM138		150GLEN-RM139 (FD- Room 138)		150GLEN-RM138			
Sample Date: Units:			11/24/08		3/2/09		3/2/09		8/27/09		8/27/09		11/11/09		11/11/09		2/19/10		2/19/10		11/11/10		11/11/10		3/17/11		3/17/11		5/23/15			
			µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte			Method																													
Volatile Organic Compounds (VOCs)			TO-15																													
Carbon tetrachloride					0.63 J	0.10 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dichloroethane, 1, 1-					< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane, 1, 2-					< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dichloroethene, 1, 1-					< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.52	< 0.13	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-					< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane, 1,1,2,2-					< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)					< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 0.95	< 0.14	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane, 1,1,1- (TCA)					< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 0.76	< 0.14	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)					< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 0.70	< 0.13	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 141																													
		150 GLEN-ROOM 141		150GLEN-ROOM 141		150 GLEN-ROOM 141		150 GLEN-RM 141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141			
Sample Date:		1/6/07		3/8/07		4/20/07		5/17/07		7/30/07		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/17/08			
Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv		
Analyte	Method																														
Volatile Organic Compounds (VOCs)		TO-15																													
Carbon tetrachloride		0.45 J J+	0.071 J J+	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3 J+	< 0.20 J+	0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20
Dichloroethane, 1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane, 1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene, 1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane, 1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4 J+	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4 J+	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane, 1,1,1,- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 141 (continued)																Room 142															
		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		150GLEN-RM141		RM142		150 GLEN-ROOM 142		150 GLEN-RM 142		150GLEN-ROOM 142		150 GLEN-ROOM 142		150 GLEN-RM 142		150GLEN-RM142			
Sample Date: Units:		4/21/08		8/18/08		11/24/08		3/2/09		8/27/09		2/19/10		11/11/10		3/17/11		1/2/07		1/6/07		2/7/07		3/8/07		4/20/07		5/17/07		7/30/07			
		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv		
Volatile Organic Compounds (VOCs)		TO-15																															
Carbon tetrachloride		0.69 J	0.11 J	0.60 J	0.096 J	0.63 J	0.10 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	< 1.3	< 0.20	0.52 J J+	0.083 J J+	0.82 J	0.13 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.63 J	0.10 J		
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	1.4	0.35	1.2 J+	0.29 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20		
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	1.0	0.25		
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	0.87	0.22	2.5 J+	0.63 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20		
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20		
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4 J+	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20		
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	28	4.1	45 J+	6.6 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20		
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	0.33 J J+	0.061 J J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20		
Trichloroethylene (TCE)		< 1.1	< 0.20	0.62 J	0.092 J	0.62 J	0.092 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	3.7	0.69	5.4 J+	1 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20		

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 7. NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 142 (cont)																											
		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142	
		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/17/08		4/21/08		8/18/08		11/24/08		3/2/09		8/27/09	
Sample Date:		Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	Method	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Volatile Organic Compounds (VOCs)		TO-15																											
Carbon tetrachloride		0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.75 J	0.12 J	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane, 1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane, 1,2-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene, 1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane, 1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane, 1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 142 (continued)								Room 144				Room 145		Room 146															
		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150GLEN-RM142		150 GLEN-ROOM 144		144 (Alpha duplicate)		150 GLEN-ROOM 145		150 GLEN-ROOM 146A		150 GLEN-ROOM 146B		150 GLEN-ROOM 146B (FD-Room 146)		RM146		150 GLEN-ROOM 146		150 GLEN-RM 146		150GLEN-ROOM 146		150 GLEN-ROOM 146	
		2/19/10		11/11/10		3/17/11		5/23/15		1/13/07		1/13/07		1/6/07		12/27/06		12/28/06		12/28/06		1/2/07		1/6/07		2/7/07		3/8/07		4/20/07	
Sample Date:		Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	Method																														
Volatile Organic Compounds (VOCs)		TO-15																													
Carbon tetrachloride		< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	0.88 J	0.14 J	< 3.14	< 0.50	0.45 J J+	0.071 J J+	1.1 J	0.18 J	< 1.3	< 0.20	0.49 J	0.078 J	0.63 J	0.10 J	< 1.3	< 0.20	0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane, 1,1-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20	< 2.02	< 0.50	< 0.81	< 0.20	10	2.5	3.6	0.88	3.3	0.82	0.53 J	0.13 J	0.57 J J+	0.14 J J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane, 1,2-		< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	< 0.81	< 0.20	< 1.98	< 0.50	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene, 1,1-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.52	< 0.13	< 0.79	< 0.20	< 0.79	< 0.20	< 1.98	< 0.50	< 0.79	< 0.20	7.9	2.0	4.0	1.0	3.9	0.99	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.37	< 0.094	< 0.79	< 0.20	< 0.79	< 0.20	< 2.02	< 0.50	< 0.79	< 0.20	3.3	0.83	1.3	0.33	1.2	0.31	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 2.0	< 0.50	< 0.79	< 0.20
Tetrachloroethane, 1,1,2,2-		< 1.4	< 0.20	< 1.4	< 0.20	< 0.82	< 0.12	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 0.95	< 0.14	< 1.4	< 0.20	4.1	0.61	4.36	0.643	< 1.4	< 0.20	186	27.5	83.4	12.3	85.4	12.6	11	1.6	26 J+	3.8 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane, 1,1,1- (TCA)		< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	< 1.1	< 0.20	< 2.72	< 0.50	< 1.1	< 0.20	2.1	0.38	0.82 J	0.15 J	0.71 J	0.13 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 1.1	< 0.20	1.3	0.24	< 2.68	< 0.50	< 1.1	< 0.20	37	6.8	10	1.9	11	2.1	1.7	0.32	3.0 J+	0.56 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 7. NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 146 (continued)																											
		150 GLEN-RM 146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146	
		5/17/07		7/30/07		9/10/07		10/8/07		10/14/07		11/15/07		12/13/07		1/21/08		2/19/08		2/22/08		3/17/08		4/21/08		8/18/08		11/24/08	
Sample Date:		Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	Method																												
Volatile Organic Compounds (VOCs)																													
Carbon tetrachloride	TO-15	< 1.3	< 0.20	0.62 J	0.099 J	0.82 J	0.13 J	< 1.3	< 0.20	0.58 J	0.092 J	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.62 J	0.098 J	< 1.3	< 0.20	0.75 J	0.12 J	0.60 J	0.096 J	0.63 J	0.10 J
Dichloroethane,1,1-		< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2-		< 0.81	< 0.20	< 0.81 J+	< 0.20 J+	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	0.49 J	0.12 J	< 0.81	< 0.20
Dichloroethene,1,1-		< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2-		< 0.79	< 0.20	< 0.79 J+	< 0.20 J+	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2-		< 1.4	< 0.20	< 1.4 +	< 0.20 J+	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	1.0 J	0.15 J	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1- (TCA)		< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)	< 1.1	< 0.20	< 1.1 J+	< 0.20 J+	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Room 146 (continued)														Outside of School by Room 126 Window						Outside of School by Day Care Window					
		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150GLEN-RM146		150 GLEN-0-1A		150 GLEN-0-1B		150 GLEN-0-1A		150 GLEN-0-2A		150 GLEN-0-2B		150 GLEN-0-2A	
		3/2/09		8/27/09		11/11/09		2/19/10		11/11/10		3/17/11		5/23/15		12/27/06		12/28/06		1/6/07		12/27/06		12/28/06		1/6/07	
Analyte	Method	Units:		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Volatile Organic Compounds (VOCs)		TO-15																									
Carbon tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT	< 1.3	< 0.20	< 1.3	< 0.20	0.52 J J+	0.083 J J+	1.1 J	0.17 J	< 1.3	< 0.20	0.52 J J+	0.082 J J+
Dichloroethane,1,1,-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.53	< 0.13	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2,-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1,-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2,-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2,-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1,- (TCA)		< 1.1	< 0.20	0.93 J	0.17 J	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.76	< 0.14	< 1.1	< 0.20	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 0.70	< 0.13	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID:		Downwind on Roof																							
		150 GLEN-ROOF B		150 GLEN-ROOF B		150GLEN-ROOF		150 GLEN-ROOF		150 GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF	
		2/8/07		2/8/07		3/8/07		4/20/07		5/17/07		8/9/07		9/10/07		10/14/07		11/14/07		12/17/07		1/21/08		2/19/08	
Sample Date:		Units:																							
Analyte	Method	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv
Volatile Organic Compounds (VOCs)		TO-15																							
Carbon tetrachloride		< 1.3	< 1.3	< 0.20	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane,1,1,-		< 0.81	< 0.81	< 0.20	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane,1,2,-		< 0.81	< 0.81	< 0.20	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene,1,1,-		< 0.79	< 0.79	< 0.20	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2,-		< 0.79	< 0.79	< 0.20	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane,1,1,2,2,-		< 1.4	< 1.4	< 0.20	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 1.4	< 0.20	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane,1,1,1,- (TCA)		< 1.2	< 1.2	< 0.21	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21
Trichloroethylene (TCE)		< 1.1	< 1.1	< 0.20	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 5-2. Chemical Testing Results - Capuano Center Indoor and Outdoor Air
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Sample Location: Sample ID: Sample Date: Units:		Downwind on Roof (cont)											
		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF		150GLEN-ROOF	
		3/17/08		4/21/08		8/18/08		11/24/08		8/27/09		11/11/09	
Analyte	Method	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Volatile Organic Compounds (VOCs)	TO-15												
Carbon tetrachloride		< 1.3	< 0.20	0.69 J	0.11 J	0.63 J	0.10 J	0.63 J	0.10 J	< 1.3	< 0.20	< 1.3	< 0.20
Dichloroethane, 1,1,-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethane, 1,2,-		< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20
Dichloroethene, 1,1,-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Dichloroethylene, cis-1,2,-		< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20	< 0.79	< 0.20
Tetrachloroethane, 1,1,2,2,-		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20
Trichloroethane, 1,1,1,- (TCA)		< 1.2	< 0.21	< 1.2	< 0.21	< 1.2	< 0.21	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20
Trichloroethylene (TCE)		< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20	< 1.1	< 0.20

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
 5. FD = Field Duplicate.
 6. The samples collected in August 2009, November 2009, February 2010, November 2010, March 2011, and May 2015 were collected over a 24 hour period.
 - 7 NT = Not Tested.

- Qualifying Notes:**
- J The reported result is below the laboratory reporting limit and is estimated.
- J+ The reported result is estimated.

Table 6-1. Exposure Pathway Mitigation Measure (EPMM) Status
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Property Address	EPMM Design Option	Date Completed or Last Modified	Date of Last Indoor Air Monitoring	Construction Details													
				Ventilation Fan(s) (Model No.) ^(a)	Fan Replacement Date	Number of Sub-Slab Vapor Extraction Points (SSDS)	Sub-slab Vapor Barrier - HDPE Liner	Sub-Slab Ventilation System - Geocomposite	Sub-Slab Vapor Trench	Foundation Wall Ventilation System - Geocomposite	New Basement Slab Installed	Crawlspace Vapor Barrier	Epoxy Vapor Barrier - Floor	Epoxy Vapor Barrier - Foundation Walls	Telemetry Installed (if necessary)	Reason Telemetry not installed (if applicable)	AUL Recorded (Yes/No)
91-93 Franklin Street	3	March, 2009	3/1/2012	-	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	Yes
95 Franklin Street	2/1 ^(b)	May, 2011	5/16/2013	GP-501	-	2	-	-	Yes	-	-	Yes	Yes	Yes	Yes	-	No
95R Franklin Street	2	December, 2007	3/8/2010	-	-	-	-	-	Yes	Yes	-	Yes	Yes	Yes	-	-	Yes
150 Glen Street (Capuano Center)	1	April, 2015	5/23/2015	GP-501 (3)	August, 2023	18	-	-	-	-	-	-	-	-	Yes	-	No
163 Glen Street	2 ^(c)	July, 2018	8/18/2020	-	-	-	Yes	-	Yes	-	Yes	-	-	-	-	-	No
166-168 Glen Street	3	November, 2010	3/1/2012	-	-	-	Yes	Yes	-	-	Yes	Yes	Yes	Yes	-	-	Yes
9 Knowlton Street	1	January, 2010	3/23/2023	GP-501	April, 2024	5	-	-	-	-	-	-	-	-	No	Refused access	Yes
13 Knowlton Street	1	January, 2010	1/10/2023	GP-501	March, 2018	4	-	-	-	-	-	-	-	-	Yes	-	Yes
17 Knowlton Street	3	March, 2009	3/7/2012	-	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	Yes
31-33 Knowlton Street	1	February, 2008	3/19/2010	GP-501	May, 2024	7	-	-	-	-	-	-	-	-	Yes	-	No
32 Knowlton Street	3	May, 2009	3/8/2011	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
34 Knowlton Street	4	June, 2014	4/27/2015	-	-	-	Yes	-	-	-	Yes	-	-	-	-	-	Yes
35-37 Knowlton Street	3/1 ^(b)	April, 2010	3/11/2011	GP-501	December, 2019	4	Yes	Yes	-	-	Yes	-	Yes	Yes	Yes	-	No
4 Morton Street	3	November, 2008	3/20/2012	-	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	No
10 Morton Street	4 ^(e)	September, 2024	3/5/2011	-	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	Yes
11 Morton Street	2	November, 2008	5/26/2021	-	-	-	-	-	Yes	Yes	-	-	Yes	Yes	-	-	Yes
12 Morton Street	3	March, 2008	11/19/2010	-	-	-	Yes	Yes	-	-	Yes	-	Yes	Yes	-	-	Yes
13 Morton Street	1	October, 2008	9/17/2014	GP-501	November, 2023	5	-	-	-	-	-	-	-	-	Yes	-	No
18 Morton Street	1	July, 2007	2/24/2011	GP-501	June, 2023	5	-	-	-	-	-	-	-	-	Yes	-	No
19-19A Morton Street	3	August, 2009	3/1/2012	-	-	-	-	-	-	-	-	-	-	-	-	-	Yes
23 Tufts Street	1	May, 2007	2/25/2010	GP-501	-	1	-	-	-	-	-	-	-	-	Yes	-	No
27 Tufts Street	3/1 ^(b)	May, 2011	5/23/2013	GP-501	-	3	Yes	Yes	-	-	Yes	Yes	Yes	Yes	Yes	-	No
31 Tufts Street	4	October, 2022	9/6/2024	-	-	-	Yes	Yes	-	-	Yes	-	-	-	-	-	No
50 Tufts Street	1	August, 2007	3/11/2015	Regenerative Blower	-	22	-	-	-	-	-	-	Yes	-	Yes	-	No
60 Tufts Street	1	April, 2009	4/25/2019	Regenerative Blower	-	14	-	-	-	-	-	-	-	-	Yes	-	No
103 Washington Street	(d)																
121 Washington	4	TBD		-	-	-	Yes	Yes	-	-	Yes	-	-	-	-	-	No

General Notes:

1. NS = Not sampled.
2. - = Not Applicable.

Footnotes:

- (a) Ventilation fans manufactured by Radon Away.
- (b) An Option 2 or 3 EPMM was initially installed at these properties; however, a fan was added to the EPMM to improve performance. Therefore, these EPMMs consist of Option 1 with Option 2 or 3 EPMM elements.
- (c) EPMM demonstrated to be no longer required based on testing requirements in the MassDEP Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure, Policy #WSC-16-435 (Section 3.7 and Tables 3-1 and 3-2).
- (d) EPMM eliminated during demolition and not installed in redevelopment
- (e) An Option 3 EPMM was initially installed at 10 Morton Street in March 2009; however, a new EPMM was installed during renovations.

Table 6-2. Indoor Air Sampling and EPMM Monitoring - June 16, 2024 through December 15, 2024
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
Residential and Commercial Properties
Somerville, Massachusetts

Property	Property Type	Indoor Air Sampling	EPMM Inspection
91-93 Franklin Street	Residential	Not Sampled	11/4/2024
95 Franklin Street	Residential	Not Sampled	6/21/2024 and 11/4/2024
95R Franklin Street	Residential	Not Sampled	NA
163 Glen Street	Residential	Not Sampled	NA
166-168 Glen Street	Residential	Not Sampled	11/6/2024
9 Knowlton Street	Residential	Not Sampled	11/11/2024
13 Knowlton Street	Residential	Not Sampled	11/13/2024
17 Knowlton Street	Residential	Not Sampled	11/13/2024
32 Knowlton Street	Residential	Not Sampled	11/6/2024
34 Knowlton Street	Residential	Not Sampled	11/4/2024
31-33 Knowlton Street	Residential	Not Sampled	11/6/2024
35-37 Knowlton Street	Residential	Not Sampled	11/8/2024
4 Morton Street	Residential	Not Sampled	NA
10 Morton Street	Residential	Not Sampled	11/7/2024
11 Morton Street	Residential	Not Sampled	11/8/2024
12 Morton Street	Residential	Not Sampled	11/6/2024
13 Morton Street	Residential	Not Sampled	11/13/2024
18 Morton Street	Residential	Not Sampled	11/6/2024
19-19A Morton Street	Residential	Not Sampled	11/8/2024
23 Tufts Street	Residential	Not Sampled	11/8/2024
27 Tufts Street	Residential	Not Sampled	NA
31 Tufts Street	Residential	9/6/2024	11/8/2024
103 Washington	Residential	12/4/2024	--
105-107 Washington Street	Residential	12/4/2024	--

General Notes:

1. EPMM = Exposure Pathway Mitigation Measure.
2. See Appendix E for Air Sampling Checklists and Appendix H for EPMM forms.
3. See Section 6 for a description of EPMM Inspection activities. 60 Tufts Street EPMM is inspected quarterly; see Section 7.
4. NA = No inspection was performed during this reporting period.
5. SSDS = Sub-slab depressurization system.

Table 7-1. Summary of SSDS Monitoring Events - 60 Tufts Street
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured	Analytical Samples Collected (Yes/No)?
7/11/2024	1	SSDS Quarterly Monitoring	-Pressure readings and VOC concentrations at system influent/effluent and blower. -System flow rate.	No
10/9/2024	2	SSDS Quarterly Monitoring	-Pressure readings and VOC concentrations at system influent/effluent and blower. -System flow rate.	No

General Notes:

1. SSDS = Sub-Slab Depressurization System.
2. RMR = Remedial Monitoring Report.
3. VOC = Volatile Organic Compound.
4. VOC measurements collected with a ppm-RAE calibrated to 100 ppm isobutylene gas.
5. Pressure readings collected using a Dwyer 475-000-FM manometer.

Table 8-1. Summary of SSDS Monitoring Events - 50 Tufts Street
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Monitoring Date	Monitoring Event per RMR Report Period	Type of Monitoring Event	SSDS Field Parameters Measured	Analytical Samples Collected (Yes/No)?
6/21/2024	1	SSDS Monthly Monitoring	-VOC concentrations at the combined influent, and effluent pipes. -VOC concentrations at carbon tanks.	No
7/10/2024	2	SSDS Quarterly Monitoring	-Pressure readings and VOC concentrations at the combined influent, and effluent pipes. -Pressure readings and VOC concentrations at carbon tanks. -System flow rate.	No
8/9/2024	3	SSDS Monthly Monitoring	-VOC concentrations at the combined influent, and effluent pipes. -VOC concentrations at carbon tanks.	No
9/19/2024	4	SSDS Monthly Monitoring	-VOC concentrations at the combined influent, and effluent pipes. -VOC concentrations at carbon tanks.	No
10/9/2024	5	SSDS Quarterly Monitoring	-Pressure readings and VOC concentrations at the combined influent, and effluent pipes. -Pressure readings and VOC concentrations at carbon tanks. -System flow rate.	No
11/7/2024	6	SSDS Monthly Monitoring	-VOC concentrations at the combined influent, and effluent pipes. -VOC concentrations at carbon tanks.	No
12/13/2024	7	SSDS Monthly Monitoring	-VOC concentrations at the combined influent, and effluent pipes. -VOC concentrations at carbon tanks.	No

General Notes:

1. SSDS = Sub-Slab Depressurization System.
2. RMR = Remedial Monitoring Report.
3. VOC = Volatile Organic Compound.
4. VFD = Variable Flow Drive.
5. SVT/SVE = Soil Vapor Temporary Point/Soil Vapor Extraction.
6. VOC measurements collected with a ppm-RAE calibrated to 100 parts per million (ppm) with 10.6V lamp.
7. Pressure readings collected using a Dwyer 475-000-FM manometer.

Table 9-1. Groundwater Elevations
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	5/15/2006		5/16/2006		5/23/2006		5/31/2006		7/24/2006		8/1/2006		8/3/2006		8/16/2006	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	9.69	16.21	9.53	16.37	10.9	15	11.39	14.51	--	--	--	--	--	--	11.9	14
MW-2	unknown	25.38	8.99	16.39	10.36	15.02	Dry	Dry	Dry	Dry	--	--	--	--	--	--	Dry	Dry
MW-3	unknown	25.31	8.88	16.43	9.32	15.99	11.16	14.15	12.71	12.6	--	--	--	--	--	--	13.73	11.58
MW-101	9 - 19	26.75	--	--	10.56	16.19	11.53	15.22	12.1	14.65	12.33	14.42	12.51	14.24	13.47	13.28	12.78	13.97
MW-102	6 - 16	18.89	--	--	6.62	12.27	6.86	12.03	7.44	11.45	7.93	10.96	8.16	10.73	9.11	9.78	8.51	10.38
MW-103	6 - 16	19.47	--	--	9.5	9.97	10.37	9.1	10.74	8.73	11.15	8.32	11.31	8.16	12.24	7.23	11.72	7.75
MW-104	5 - 15	17.67	--	--	--	--	7.93	9.74	8.89	8.78	9.06	8.61	9.39	8.28	10.29	7.38	9.87	7.8
MW-104R	5 - 15	15.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-105	19 - 29	38.84	--	--	19.49	19.35	20.21	18.63	20.7	18.14	21.18	17.66	21.43	17.41	22.41	16.43	21.91	16.93
MW-106	9 - 19	26.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-107	2 - 12	14.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-108	2 - 12	12.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-109	3 - 13	24.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-110	3 - 13	15.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-111	4 - 14	18.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-111R	5 - 15	18.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	3 - 10	18.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112a	4 - 19	17.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-113	10 - 20	26.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-114	7 - 17	29.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-115	10 - 25	27.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-116	5 - 15	13.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117S	5 - 20	21.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117T	35 - 45	21.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117D	60 - 70	21.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118S	3 - 14	15.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118T	39.5 - 49.5	15.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118D	70 - 80	15.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-119S	5 - 20	11.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-119T	42 - 47	11.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-120S	5 - 20	12.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-120D	28 - 38	12.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-121S	5 - 20	12.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-121D	32 - 47	12.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-122	4 - 16	16.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GEO-1	5 - 20	25.88	9.69	16.19	9.9	15.98	10.92	14.96	11.36	14.52	--	--	--	--	--	--	11.82	14.06
GEO-2	5 - 20	26.54	9.76	16.78	--	--	11.38	15.16	11.91	14.63	--	--	--	--	--	--	12.51	14.03
GEO-3	5 - 20	25.64	10.43	15.21	9.59	16.05	9.87	15.77	10.67	14.97	11.67	13.97	11.85	13.79	12.84	12.8	12.25	13.39
GEO-4	4 - 19	21.69	--	--	7.79	13.9	9.85	11.84	10.78	10.91	11.25	10.44	11.45	10.24	12.43	9.26	11.9	9.79
GEO-5	5 - 20	20.14	--	--	6.78	13.36	9.08	11.06	9.96	10.18	10.29	9.85	10.56	9.58	11.51	8.63	10.99	9.15
GEO-6	5 - 20	17.62	--	--	5.66	11.96	7.39	10.23	8.23	9.39	8.43	9.19	8.73	8.89	9.64	7.98	9.25	8.37
SH-1	9 - 14	29.55	10.15	19.4	11.4	18.15	Dry	Dry	Dry	Dry	--	--	--	--	--	--	Dry	Dry
SH-2	7 - 14	29.64	5.71	23.93	7.86	21.78	12.07	17.57	12.22	17.42	--	--	--	--	--	--	11.98	17.66
SH-3	8 - 13	29.66	7.54	22.12	8.56	21.1	12.73	16.93	12.96	16.7	--	--	--	--	--	--	Dry	Dry
SH-4	11 - 16	29.63	13.53	16.1	13.48	16.15	14.48	15.15	15.02	14.61	--	--	--	--	--	--	15.09	14.54
SH-5	8 - 13	29.63	Dry	Dry	--	--	12.99	16.64	13.03	16.6	--	--	--	--	--	--	Dry	Dry
SH-MW1	10 - 30	24.02	6.72	17.3	--	--	11.44	12.58	12.18	11.84	--	--	--	--	--	--	13.09	10.93
SH-MW2	10 - 25	24.27	9.33	14.94	--	--	12.05	12.22	12.69	11.58	--	--	--	--	--	--	13.38	10.89
SH-MW2R	10 - 23	24.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	7.8	14.51	--	--	10.26	12.05	11.03	11.28	--	--	--	--	--	--	13	9.31
MW201	11 - 21	27.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW202	10.5 - 20.5	27.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW203	6 - 18	21.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW203R	13 - 23	24.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

- General Notes:**
- ft = feet.
 - bgs = below ground surface.
 - ID = identification.
 - GW = groundwater.
 - NAVD = North American Vertical Datum of 1988.
 - The top of the PVC riser was used as the measuring point for depth to groundwater.
 - "--" = Well not yet installed, abandoned, or not measured.
 - NM = Not measured.

Table 9-1. Groundwater Elevations
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	9/29/2006		10/4/2006		11/14/2006		12/12/2006		1/16/2007		2/12/2007		3/14/2007		4/12/2007	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	11.88	14.02	--	--	--	--	11.6	14.3	--	--	--	--	11.39	14.51
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	Destroyed	Destroyed	--	--	--	--	--	--
MW-3	unknown	25.31	--	--	13.75	11.56	--	--	--	--	13.05	12.26	--	--	--	--	12.57	12.74
MW-101	9 - 19	26.75	12.85	13.9	12.76	13.99	12.25	14.5	12.57	14.18	12.4	14.35	12.81	13.94	12.34	14.41	12.11	14.64
MW-102	6 - 16	18.89	8.68	10.21	8.52	10.37	7.64	11.25	8.01	10.88	7.72	11.17	8.52	10.37	--	--	7.46	11.43
MW-103	6 - 16	19.47	11.98	7.49	11.92	7.55	11	8.47	11.21	8.26	10.88	8.59	11.74	7.73	11	8.47	10.66	8.81
MW-104	5 - 15	17.67	9.95	7.72	9.92	7.75	--	--	--	--	8.73	8.94	--	--	--	--	8.75	8.92
MW-104R	5 - 15	15.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-105	19 - 29	38.84	22.27	16.57	22.18	16.66	21.16	17.68	21.76	17.08	21.46	17.38	22.03	16.81	21.56	17.28	20.88	17.96
MW-106	9 - 19	26.33	--	--	--	--	--	--	--	--	--	--	12.27	14.06	12.91	13.42	11.65	14.68
MW-107	2 - 12	14.63	--	--	--	--	--	--	--	--	--	--	4.54	10.09	4.5	10.13	4.49	10.14
MW-108	2 - 12	12.74	--	--	--	--	--	--	--	--	--	--	4.93	7.81	4.02	8.72	9.91	2.83
MW-109	3 - 13	24.12	--	--	--	--	--	--	--	--	--	--	12.07	12.05	11.27	12.85	10.27	13.85
MW-110	3 - 13	15.58	--	--	--	--	--	--	--	--	--	--	5.99	9.59	1.46	14.12	1.04	14.54
MW-111	4 - 14	18.95	--	--	--	--	--	--	--	--	--	--	11.38	7.57	10.62	8.33	10.65	8.3
MW-111R	5 - 15	18.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	3 - 10	18.16	--	--	--	--	--	--	--	--	--	--	Dry	Dry	8.01	10.15	Dry	Dry
MW-112a	4 - 19	17.78	--	--	--	--	--	--	--	--	--	--	--	--	12.76	5.02	12.76	5.02
MW-113	10 - 20	26.16	--	--	--	--	--	--	--	--	--	--	--	--	11.66	14.5	11.44	14.72
MW-114	7 - 17	29.43	--	--	--	--	--	--	--	--	--	--	--	--	12.67	16.76	11.27	18.16
MW-115	10 - 25	27.15	--	--	--	--	--	--	--	--	--	--	--	--	17.19	9.96	16.21	10.94
MW-116	5 - 15	13.45	--	--	--	--	--	--	--	--	--	--	--	--	8.78	4.67	8.34	5.11
MW-117S	5 - 20	21.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117T	35 - 45	21.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117D	60 - 70	21.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118S	3 - 14	15.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118T	39.5 - 49.5	15.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-118D	70 - 80	15.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-119S	5 - 20	11.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-119T	42 - 47	11.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-120S	5 - 20	12.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-120D	28 - 38	12.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-121S	5 - 20	12.44	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-121D	32 - 47	12.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-122	4 - 16	16.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GEO-1	5 - 20	25.88	--	--	11.85	14.03	--	--	--	--	11.55	14.33	--	--	--	--	11.36	14.52
GEO-2	5 - 20	26.54	--	--	12.51	14.03	--	--	--	--	12.2	14.34	--	--	--	--	11.97	14.57
GEO-3	5 - 20	25.64	12.37	2.84	12.35	13.29	11.63	14.01	11.72	13.92	11.58	14.06	12.21	13.43	11.49	14.15	10.76	14.88
GEO-4	4 - 19	21.69	12.09	9.6	12.04	9.65	10.58	11.11	11.31	10.38	10.77	10.92	11.83	9.86	11.03	10.66	10.51	11.18
GEO-5	5 - 20	20.14	11.21	8.93	11.15	8.99	9.47	10.67	10.48	9.66	9.73	10.41	11.02	9.12	10.15	9.99	9.7	10.44
GEO-6	5 - 20	17.62	9.41	8.21	9.26	8.36	7.65	9.97	8.82	8.8	8.11	9.51	9.3	8.32	8.54	9.08	8.32	9.3
SH-1	9 - 14	29.55	--	--	Dry	Dry	--	--	--	--	Dry	Dry	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	12	17.64	--	--	--	--	Dry	Dry	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	Dry	Dry	--	--	--	--	Dry	Dry	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	15.1	14.53	--	--	--	--	Dry	Dry	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	Dry	Dry	--	--	--	--	Dry	Dry	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	13.17	10.85	--	--	--	--	12.21	11.81	--	--	--	--	12.01	12.01
SH-MW2	10 - 25	24.27	--	--	13.41	10.86	--	--	--	--	12.73	11.54	--	--	--	--	12.61	11.66
SH-MW2R	10 - 23	24.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	--	--	12.04	10.27	--	--	--	--	11.04	11.27	--	--	--	--	10.81	11.5
MW201	11 - 21	27.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW202	10.5 - 20.5	27.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW203	6 - 18	21.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW203R	13 - 23	24.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

- General Notes:
- ft = feet.
 - bgs = below ground surface.
 - ID = identification.
 - GW = groundwater.
 - NAVD = North American Vertical Datum of 1988.
 - The top of the PVC riser was used as the measuring point for depth to groundwater.
 - "-" = Well not yet installed, abandoned, or not measured.
 - NM = Not measured.

Table 9-1. Groundwater Elevations
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Gauging Date:			5/29/2007		6/26/2007		7/16/2007		8/22/2007		9/27/2007		10/23/2007		11/30/2007		1/9/2008	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	11.41	14.49	11.8	14.1	12.04	13.86	--	--	12.26	13.64	12.07	13.83	11.95	13.95	--	--
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	14.89	10.42	13.6	11.71	13.94	11.37	--	--	14.34	10.97	13.94	11.37	13.75	11.56	12.86	12.45
MW-101	9 - 19	26.75	12.17	14.58	12.62	14.13	12.85	13.9	13.03	13.72	13.17	13.58	12.91	13.84	13.82	12.93	12.11	14.64
MW-102	6 - 16	18.89	6.72	12.17	8.36	10.53	8.74	10.15	9.08	9.81	9.35	9.54	8.97	9.92	8.01	10.88	7.46	11.43
MW-103	6 - 16	19.47	10.81	8.66	11.47	8.0	11.92	7.55	12.3	7.17	12.63	6.84	--	--	12.18	7.29	10.74	8.73
MW-104	5 - 15	17.67	--	--	9.62	8.05	10.09	7.58	10.36	7.31	10.61	7.06	10.31	7.36	10.07	7.6	8.86	8.81
MW-104R	5 - 15	15.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-105	19 - 29	38.84	20.86	17.98	21.55	17.29	22.13	16.71	22.79	16.05	23.18	15.66	22.96	15.88	22.74	16.1	21.39	17.45
MW-106	9 - 19	26.33	11.69	14.64	12.07	14.26	12.33	14	12.48	13.85	12.61	13.72	12.39	13.94	12.27	14.06	11.71	14.62
MW-107	2 - 12	14.63	4.46	10.17	4.48	10.15	4.52	10.11	4.75	9.88	4.51	10.12	4.47	10.16	4.44	10.19	4.35	10.28
MW-108	2 - 12	12.74	4.25	8.49	5.06	7.68	6.59	6.15	6.25	6.49	6.28	6.46	5.86	6.88	4.74	8.0	3.71	9.03
MW-109	3 - 13	24.12	10.73	13.39	11.76	12.36	12.24	11.88	Dry	Dry	Dry	Dry	Dry	Dry	12.78	11.34	10.64	13.48
MW-110	3 - 13	15.58	2.56	13.02	6.57	9.01	7.17	8.41	7.86	7.72	8.37	7.21	6.92	8.66	3.34	12.24	--	--
MW-111	4 - 14	18.95	10.68	8.27	11.11	7.84	11.54	7.41	11.96	6.99	12.34	6.61	11.99	6.96	12.27	6.68	10.51	8.44
MW-111R	5 - 15	18.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	3 - 10	18.16	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
MW-112a	4 - 19	17.78	12.67	5.11	12.81	4.97	12.88	4.9	--	--	12.95	4.83	12.8	4.98	--	--	12.43	5.35
MW-113	10 - 20	26.16	11.51	14.65	11.99	14.17	12.22	13.94	12.43	13.73	12.58	13.58	12.3	13.86	12.6	13.56	11.5	14.66
MW-114	7 - 17	29.43	11.53	17.9	12.88	16.55	15.57	13.86	14.24	15.19	14.84	14.59	14.66	14.77	14.31	15.12	12.08	17.35
MW-115	10 - 25	27.15	16.63	10.52	17.42	9.73	17.97	9.18	18.38	8.77	18.81	8.34	18.37	8.78	18.24	8.91	16.18	10.97
MW-116	5 - 15	13.45	8.65	4.8	8.76	4.69	--	--	8.85	4.6	8.91	4.54	8.83	4.62	--	--	8.6	4.85
MW-117S	5 - 20	21.94	--	--	--	--	15.27	6.67	15.7	6.24	16.03	5.91	16.2	5.74	15.95	5.99	13.97	7.97
MW-117T	35 - 45	21.87	--	--	--	--	15.95	5.92	16.38	5.49	16.81	5.06	16.91	4.96	16.58	5.29	14.58	7.29
MW-117D	60 - 70	21.78	--	--	--	--	15.87	5.91	16.26	5.52	16.69	5.09	16.77	5.01	16.44	5.34	14.46	7.32
MW-118S	3 - 14	15.52	--	--	--	--	11.64	3.88	9.84	5.68	10.2	5.32	9.42	6.1	9.4	6.12	8.55	6.97
MW-118T	39.5 - 49.5	15.30	--	--	--	--	10.36	4.94	10.51	4.79	10.74	4.56	10.68	4.62	10.5	4.8	9.93	5.37
MW-118D	70 - 80	15.15	--	--	--	--	10.18	4.97	10.32	4.83	10.55	4.6	10.49	4.66	10.25	4.9	9.55	5.6
MW-119S	5 - 20	11.74	--	--	--	--	--	--	4.91	6.83	4.99	6.75	4.93	6.81	4.85	6.89	4.63	7.11
MW-119T	42 - 47	11.67	--	--	--	--	--	--	6.45	5.22	6.8	4.87	6.72	4.95	6.57	5.1	5.82	5.85
MW-120S	5 - 20	12.54	--	--	--	--	--	--	5.25	7.29	5.35	7.19	4.71	7.83	4.62	7.92	3.51	9.03
MW-120D	28 - 38	12.45	--	--	--	--	--	--	--	--	4.21	8.24	3.94	8.51	3.48	8.97	3.17	9.28
MW-121S	5 - 20	12.44	--	--	--	--	--	--	--	--	--	--	7.36	5.08	7.41	5.03	7.24	5.2
MW-121D	32 - 47	12.81	--	--	--	--	--	--	--	--	--	--	7.92	4.89	7.75	5.06	6.95	5.86
MW-122	4 - 16	16.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GEO-1	5 - 20	25.88	11.38	14.5	11.73	14.15	11.93	13.95	12.1	13.78	12.21	13.67	11.98	13.9	11.91	13.97	11.41	14.47
GEO-2	5 - 20	26.54	11.99	14.55	12.4	14.14	13.6	12.94	12.81	13.73	12.91	13.63	12.63	13.91	12.57	13.97	12.02	14.52
GEO-3	5 - 20	25.64	11.04	14.6	11.94	13.7	---	---	12.7	12.94	12.94	12.7	12.61	13.03	12.54	13.1	10.99	14.65
GEO-4	4 - 19	21.69	10.87	10.82	11.64	10.05	12.09	9.6	12.55	9.14	13.02	8.67	12.64	9.05	12.47	9.22	11.72	9.97
GEO-5	5 - 20	20.14	10.01	10.13	10.79	9.35	11.25	8.89	11.74	8.4	11.18	8.96	11.72	8.42	12.62	7.52	9.92	10.22
GEO-6	5 - 20	17.62	8.25	9.37	8.9	8.72	9.5	8.12	9.92	7.7	10.22	7.4	9.96	7.66	9.96	7.66	8.21	9.41
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	12.26	11.76	---	---	---	---	--	--	--	--	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	12.74	11.53	13.25	11.02	13.48	10.79	13.72	10.55	14.04	10.23	13.68	10.59	13.85	10.42	12.77	11.5
SH-MW2R	10 - 23	24.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	--	--	11.72	10.59	12.08	10.23	12.43	9.88	12.79	9.52	12.41	9.9	12.05	10.26	11.55	10.76
MW201	11 - 21	27.51	--	--	--	--	--	--	13.71	13.8	13.83	13.68	13.58	13.93	13.5	14.01	12.98	14.53
MW202	10.5 - 20.5	27.82	--	--	--	--	--	--	13.99	13.83	14.08	13.74	13.88	13.94	13.81	14.01	13.41	14.41
MW203	6 - 18	21.80	--	--	--	--	--	--	14.05	7.75	14.39	7.41	13.86	7.94	13.61	8.19	12.86	8.94
MW203R	13 - 23	24.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

- General Notes:**
- ft = feet.
 - bgs = below ground surface.
 - ID = identification.
 - GW = groundwater.
 - NAVD = North American Vertical Datum of 1988.
 - The top of the PVC riser was used as the measuring point for depth to groundwater.
 - "-" = Well not yet installed, abandoned, or not measured.
 - NM = Not measured.

Table 9-1. Groundwater Elevations
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

Gauging Date:			2/26/2008		3/18/2008		4/15/2008		5/19/2008		7/14/08		8/22/08		10/20/08		1/13/09	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	--	--	11.42	14.48	11.57	14.33	--	--	--	--	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	12.05	13.26	12.37	12.94	12.81	12.5	12.99	---	--	--	--	--	--	--	12.49	12.82
MW-101	9 - 19	26.75	--	--	11.85	14.9	12.02	14.73	12.26	14.49	13.11	13.64	--	--	12.61	14.14	12.07	14.68
MW-102	6 - 16	18.89	7.29	11.6	7.17	11.72	8.57	10.32	7.9	10.99	9.51	9.38	8.00	10.89	8.49	10.4	7.50	11.39
MW-103	6 - 16	19.47	10.51	8.96	10.5	8.97	10.82	8.65	11.11	8.36	12.17	7.30	11.17	8.30	11.87	7.6	10.73	8.74
MW-104	5 - 15	17.67	8.61	9.06	8.48	9.19	9.84	7.83	9.25	8.42	9.67	8.00	9.06	8.61	9.72	7.95	8.71	8.96
MW-104R	5 - 15	15.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-105	19 - 29	38.84	20.79	18.05	20.41	18.43	20.91	17.93	21.24	17.6	22.02	16.82	21.40	17.44	21.8	17.04	20.9	17.94
MW-106	9 - 19	26.33	11.51	14.82	11.38	14.95	12.54	13.79	11.72	14.61	11.68	14.65	11.73	14.60	11.64	14.69	11.6	14.73
MW-107	2 - 12	14.63	--	--	4.46	10.17	5.58	9.05	---	---	4.52	10.11	4.41	10.22	4.49	10.14	4.5	10.13
MW-108	2 - 12	12.74	4.61	8.13	3.68	9.06	3.91	8.83	3.99	8.75	5.16	7.58	4.44	8.30	4.71	8.03	3.4	9.34
MW-109	3 - 13	24.12	10.06	14.06	10.02	14.1	11.64	12.48	11.29	12.83	11.87	12.25	11.18	12.94	11.73	12.39	10.43	13.69
MW-110	3 - 13	15.58	0.79	14.79	1.12	14.46	1.57	14.01	2.5	13.08	--	--	3.59	11.99	--	--	1.45	14.13
MW-111	4 - 14	18.95	10.5	8.45	10.54	8.41	16.64	2.31	10.71	8.24	12.23	6.72	10.73	8.22	11.37	7.58	10.55	8.4
MW-111R	5 - 15	18.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	3 - 10	18.16	Dry	Dry	--	--	----	---	----	---	--	--	--	--	--	--	--	--
MW-112a	4 - 19	17.78	12.52	5.26	12.61	5.17	13.71	4.07	12.77	5.01	13.56	4.22	12.93	4.85	13.01	4.77	12.78	5.0
MW-113	10 - 20	26.16	11.28	14.88	11.15	15.01	11.39	14.77	11.62	14.54	12.01	14.15	11.63	14.53	11.99	14.17	11.41	14.75
MW-114	7 - 17	29.43	11.11	18.32	10.75	18.68	12.42	17.01	12.3	17.13	13.24	16.19	12.21	17.22	13.19	16.24	11.25	18.18
MW-115	10 - 25	27.15	15.85	11.3	15.86	11.29	16.45	10.7	16.72	10.43	18.49	8.66	16.78	10.37	17.8	9.35	16.35	10.8
MW-116	5 - 15	13.45	8.68	4.77	8.77	4.68	8.85	4.6	8.88	4.57	9.09	4.36	9.01	4.44	--	--	8.94	--
MW-117S	5 - 20	21.94	13.52	8.42	13.5	8.44	14.22	7.72	14.6	7.34	14.99	6.95	13.90	8.04	14.67	7.27	14.02	7.92
MW-117T	35 - 45	21.87	13.97	7.9	13.9	7.97	14.67	7.2	14.94	6.93	15.68	6.19	15.27	6.60	15.26	6.61	14.45	7.42
MW-117D	60 - 70	21.78	13.86	7.92	13.81	7.97	14.51	7.27	14.89	6.89	15.61	6.17	14.67	7.11	15.27	6.51	14.3	7.48
MW-118S	3 - 14	15.52	8.34	7.18	8.4	7.12	10	5.52	9.38	6.14	9.64	5.88	8.48	7.04	9.05	6.47	8.41	7.11
MW-118T	39.5 - 49.5	15.30	9.49	5.81	9.53	5.77	9.83	5.47	9.94	5.36	10.35	4.95	9.92	5.38	10.19	5.11	9.73	5.57
MW-118D	70 - 80	15.15	9.3	5.85	9.35	5.8	9.64	5.51	9.8	5.35	10.11	5.04	9.70	5.45	9.99	5.16	9.54	5.61
MW-119S	5 - 20	11.74	4.6	7.14	4.56	7.18	4.91	6.83	4.92	6.82	4.94	6.80	6.08	5.66	4.08	7.66	4.41	7.33
MW-119T	42 - 47	11.67	5.63	6.04	5.78	5.89	5.97	5.7	6.1	5.57	6.52	5.15	4.52	7.15	6.78	4.89	5.85	5.82
MW-120S	5 - 20	12.54	4.06	8.48	4.0	8.54	5.1	7.44	4.57	7.97	5.18	7.36	4.61	7.93	4.01	8.53	4.03	8.51
MW-120D	28 - 38	12.45	2.96	9.49	3.11	9.34	3.26	9.19	3.44	9.01	3.82	8.63	2.90	9.55	3.32	9.13	3.18	9.27
MW-121S	5 - 20	12.44	7.36	5.08	7.41	5.03	9.39	3.05	7.29	5.15	9.21	3.23	7.70	4.74	9.01	3.43	7.68	4.76
MW-121D	32 - 47	12.81	6.83	5.98	6.91	5.9	7.31	5.5	7.27	5.54	7.64	5.17	7.30	5.51	9.64	3.17	7.07	5.74
MW-122	4 - 16	16.42	12.98	3.44	13	3.42	13.03	3.39	12.99	3.43	13.15	3.27	13.17	3.25	11.42	5.0	13.15	3.27
GEO-1	5 - 20	25.88	11.22	14.66	--	--	11.25	14.63	11.4	14.48	12.32	13.56	12.00	13.88	12.14	13.74	11.26	14.62
GEO-2	5 - 20	26.54	11.77	14.77	--	--	12.81	13.73	12.01	14.53	11.73	14.81	11.41	15.13	11.58	14.96	11.88	14.66
GEO-3	5 - 20	25.64	10.71	14.93	--	--	10.97	14.67	---	---	12.05	13.59	11.57	14.07	--	--	--	--
GEO-4	4 - 19	21.69	10.36	11.33	10.34	11.35	11.46	10.23	11.13	10.56	11.60	10.09	11.16	10.53	11.89	9.8	10.56	11.13
GEO-5	5 - 20	20.14	9.42	10.72	9.52	10.62	10.8	9.34	10.21	9.93	10.89	9.25	10.28	9.86	11.79	8.35	9.70	10.44
GEO-6	5 - 20	17.62	7.78	9.84	7.86	9.76	9.11	8.51	8.51	9.11	9.20	8.42	7.91	9.71	10.95	6.67	8.02	9.6
SH-1	9 - 14	29.55	--	--	--	--	---	---	---	---	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	---	---	---	---	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	---	---	---	---	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	---	---	---	---	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	---	---	---	---	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	---	---	---	---	--	--	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	12.49	11.78	12.46	11.81	13.62	10.65	12.89	11.38	11.83	12.44	12.92	11.35	12.01	12.26	12.63	11.64
SH-MW2R	10 - 23	24.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	10.68	11.63	10.65	11.66	11.83	10.48	11.21	11.1	13.27	9.04	11.30	11.01	12.49	9.82	10.87	11.44
MW201	11 - 21	27.51	12.76	14.75	12.64	14.87	12.85	14.66	13.94	13.57	13.31	14.2	13.00	14.51	14.64	12.87	13.27	14.24
MW202	10.5 - 20.5	27.82	13.22	14.6	13.12	14.7	12.73	15.09	13.37	14.45	13.68	14.14	13.41	14.41	13.29	14.53	12.82	15
MW203	6 - 18	21.80	12.03	9.77	12	9.8	13.31	8.49	12.68	9.12	13.15	8.65	12.55	9.25	13.02	8.78	12.25	9.55
MW203R	13 - 23	24.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

- General Notes:
- ft = feet.
 - bgs = below ground surface.
 - ID = identification.
 - GW = groundwater.
 - NAVD = North American Vertical Datum of 1988.
 - The top of the PVC riser was used as the measuring point for depth to groundwater.
 - "-" = Well not yet installed, abandoned, or not measured.
 - NM = Not measured.

Table 9-1. Groundwater Elevations
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	4/13/09		7/14/09		10/14/09		4/12/10		10/27/10		4/20/11		11/16/11		4/16/12	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	12.28	13.03	12.92	12.39	13.19	12.12	--	--	--	--	--	--	--	--	--	--
MW-101	9 - 19	26.75	11.91	14.84	12.2	14.55	12.37	14.38	11.61	15.14	--	--	11.73	15.02	--	--	12.71	14.04
MW-102	6 - 16	18.89	7.35	11.54	7.85	11.04	7.99	10.9	7.11	11.78	--	--	7.04	11.85	--	--	8.53	10.36
MW-103	6 - 16	19.47	10.57	8.9	11.07	8.4	11.34	8.13	10.47	9.00	--	--	10.39	9.08	--	--	11.79	7.68
MW-104	5 - 15	17.67	7.98	9.69	8.84	8.83	9.38	8.29	8.52	9.15	--	--	9.28	8.39	--	--	10.24	7.43
MW-104R	5 - 15	15.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-105	19 - 29	38.84	20.65	18.19	21.4	17.44	21.8	17.04	19.84	19.00	--	--	20.63	18.21	--	--	--	--
MW-106	9 - 19	26.33	11.49	14.84	overflowing	--	overflowing	--	11.16	15.17	--	--	11.39	14.94	--	--	--	--
MW-107	2 - 12	14.63	4.47	10.16	overflowing	--	overflowing	--	4.31	10.32	--	--	4.43	10.2	--	--	--	--
MW-108	2 - 12	12.74	3.73	9.01	4.37	8.37	4.66	8.08	3.86	8.88	--	--	3.56	9.18	--	--	4.72	8.02
MW-109	3 - 13	24.12	10.4	13.72	11.11	13.01	--	--	9.88	14.24	--	--	10.10	14.02	--	--	12.15	11.97
MW-110	3 - 13	15.58	1.1	14.48	2.88	12.7	2.42	13.16	1.39	14.19	--	--	1.67	13.91	--	--	--	--
MW-111	4 - 14	18.95	10.56	8.39	10.67	8.28	10.41	8.54	10.57	8.38	--	--	10.62	8.33	--	--	11.6	7.35
MW-111R	5 - 15	18.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	3 - 10	18.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112a	4 - 19	17.78	12.63	5.15	12.78	5.0	12.58	5.2	12.62	5.16	12.31	5.47	12.14	5.64	12.30	5.48	12.70	5.08
MW-113	10 - 20	26.16	11.23	14.93	11.56	14.6	11.73	14.43	10.93	15.23	--	--	11.00	15.16	--	--	12.11	14.05
MW-114	7 - 17	29.43	10.97	18.46	12.04	17.39	--	--	10.24	19.19	--	--	10.46	18.97	--	--	13.70	15.73
MW-115	10 - 25	27.15	15.4	11.75	16.58	10.57	17.4	9.75	16.43	10.72	--	--	16.22	10.93	--	--	18.51	8.64
MW-116	5 - 15	13.45	8.87	4.58	8.97	4.48	8.76	4.69	8.85	4.6	--	--	8.32	5.13	--	--	--	--
MW-117S	5 - 20	21.94	14.38	7.56	14.66	7.28	14.75	7.19	13.32	8.62	--	--	14.06	7.88	--	--	9.06	12.88
MW-117T	35 - 45	21.87	14.43	7.44	15.03	6.84	15.26	6.61	13.56	8.31	--	--	14.18	7.69	--	--	15.58	6.29
MW-117D	60 - 70	21.78	14.26	7.52	14.89	6.89	15.13	6.65	13.48	8.3	--	--	14.01	7.77	--	--	15.81	5.97
MW-118S	3 - 14	15.52	8.7	6.82	9.43	6.09	9.01	6.51	8.31	7.21	--	--	8.55	6.97	--	--	9.66	5.86
MW-118T	39.5 - 49.5	15.30	9.64	5.66	9.92	5.38	9.99	5.31	9.49	5.81	--	--	9.33	5.97	--	--	10.30	5
MW-118D	70 - 80	15.15	9.47	5.68	9.74	5.41	9.73	5.42	9.29	5.86	--	--	9.15	6.00	--	--	10.11	5.04
MW-119S	5 - 20	11.74	4.21	7.53	4.47	7.27	4.33	7.41	4.33	7.41	--	--	4.08	7.66	--	--	5.14	6.6
MW-119T	42 - 47	11.67	5.8	5.87	6.04	5.63	6.01	5.66	5.68	5.99	--	--	5.55	6.12	--	--	6.50	5.17
MW-120S	5 - 20	12.54	3.85	8.69	4.31	8.23	3.58	8.96	3.98	8.56	--	--	3.65	8.89	--	--	4.78	7.76
MW-120D	28 - 38	12.45	3.11	9.34	3.31	9.14	3.29	9.16	3.04	9.41	--	--	3.18	9.27	--	--	3.87	8.58
MW-121S	5 - 20	12.44	7.57	4.87	7.62	4.82	7.71	4.73	7.67	4.77	--	--	7.12	5.32	--	--	7.26	5.18
MW-121D	32 - 47	12.81	6.98	5.83	7.27	5.54	7.37	5.44	6.87	5.94	--	--	6.77	6.04	--	--	7.69	5.12
MW-122	4 - 16	16.42	13.16	3.26	13.14	3.28	13.12	3.3	13.09	3.33	13.04	3.38	13.06	3.36	13.16	3.26	13.1	3.32
GEO-1	5 - 20	25.88	11.07	14.81	11.31	14.57	11.54	14.34	17.06	8.82	--	--	10.92	14.96	--	--	--	--
GEO-2	5 - 20	26.54	11.7	14.84	11.99	14.55	12.25	14.29	11.41	15.13	--	--	10.55	15.99	--	--	11.81	14.73
GEO-3	5 - 20	25.64	10.86	14.78	11.48	14.16	11.79	13.85	10.27	15.37	--	--	10.62	15.02	--	--	12.21	13.43
GEO-4	4 - 19	21.69	10.21	11.48	11.00	10.69	--	--	10.26	11.43	--	--	--	--	--	--	11.98	9.71
GEO-5	5 - 20	20.14	9.30	10.84	10.08	10.06	10.44	9.7	9.48	10.66	--	--	9.18	10.96	--	--	11.18	8.96
GEO-6	5 - 20	17.62	7.48	10.14	8.18	9.44	8.66	8.96	7.62	10	--	--	7.63	9.99	--	--	9.54	8.08
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	12.33	11.94	12.77	11.5	13.01	11.26	10.61	13.66	--	--	12.29	11.98	--	--	13.53	10.74
SH-MW2R	10 - 23	24.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	10.52	11.79	11.12	11.19	11.46	10.85	12.39	9.92	--	--	10.46	11.85	--	--	12.00	10.31
MW201	11 - 21	27.51	12.69	14.82	12.94	14.57	13.09	14.42	12.42	15.09	--	--	12.57	14.94	--	--	13.43	14.08
MW202	10.5 - 20.5	27.82	13.15	14.67	13.33	14.49	13.55	14.27	12.94	14.88	--	--	13.02	14.80	--	--	--	--
MW203	6 - 18	21.80	11.5	10.3	12.29	9.51	12.77	9.03	12.03	9.77	--	--	11.83	9.97	--	--	13.85	7.95
MW203R	13 - 23	24.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

- General Notes:
- ft = feet.
 - bgs = below ground surface.
 - ID = identification.
 - GW = groundwater.
 - NAVD = North American Vertical Datum of 1988.
 - The top of the PVC riser was used as the measuring point for depth to groundwater.
 - "-" = Well not yet installed, abandoned, or not measured.
 - NM = Not measured.

Table 9-1. Groundwater Elevations
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	11/12/12		4/23/13		11/18/13		4/30/14		6/11/14		11/18/14		4/1/15		4/17/15	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-101	9 - 19	26.75	--	--	12.41	14.34	--	--	12.03	14.72	--	--	--	--	--	--	--	--
MW-102	6 - 16	18.89	--	--	8.01	10.88	--	--	7.68	11.21	--	--	--	--	6.99	11.9	--	--
MW-103	6 - 16	19.47	--	--	11.22	8.25	--	--	10.96	8.51	--	--	--	--	10.43	9.04	--	--
MW-104	5 - 15	17.67	--	--	9.64	8.03	--	--	9.5	8.17	--	--	--	--	8.04	9.63	--	--
MW-104R	5 - 15	15.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-105	19 - 29	38.84	--	--	21.31	17.53	--	--	--	--	--	--	--	--	--	--	--	--
MW-106	9 - 19	26.33	--	--	--	--	--	--	11.71	14.62	--	--	--	--	--	--	--	--
MW-107	2 - 12	14.63	--	--	--	--	--	--	3.61	11.02	--	--	--	--	--	--	--	--
MW-108	2 - 12	12.74	--	--	4.34	8.4	--	--	4.09	8.65	--	--	--	--	3.31	9.43	--	--
MW-109	3 - 13	24.12	--	--	11.37	12.75	--	--	10.79	13.33	--	--	--	--	9.61	14.51	--	--
MW-110	3 - 13	15.58	--	--	--	--	--	--	2.61	12.97	--	--	--	--	0.60	14.98	--	--
MW-111	4 - 14	18.95	--	--	11.01	7.94	--	--	10.96	7.99	--	--	--	--	10.80	8.15	--	--
MW-111R	5 - 15	18.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	3 - 10	18.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112a	4 - 19	17.78	12.72	5.06	12.80	4.98	13.11	4.67	--	--	12.86	4.92	12.39	5.39	--	--	12.86	4.92
MW-113	10 - 20	26.16	--	--	11.73	14.43	--	--	11.42	14.74	--	--	--	--	10.64	15.52	--	--
MW-114	7 - 17	29.43	--	--	12.24	17.19	--	--	12.05	17.38	--	--	--	--	10.06	19.37	--	--
MW-115	10 - 25	27.15	--	--	17.76	9.39	--	--	17.51	9.64	--	--	--	--	16.50	10.65	--	--
MW-116	5 - 15	13.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-117S	5 - 20	21.94	--	--	14.39	7.55	--	--	13.63	8.31	--	--	--	--	9.66	12.28	--	--
MW-117T	35 - 45	21.87	--	--	15.19	6.68	--	--	14.78	7.09	--	--	--	--	13.95	7.92	--	--
MW-117D	60 - 70	21.78	--	--	15.09	6.69	--	--	14.71	7.07	--	--	--	--	13.88	7.90	--	--
MW-118S	3 - 14	15.52	--	--	9.41	6.11	--	--	9.01	6.51	--	--	--	--	8.04	7.48	--	--
MW-118T	39.5 - 49.5	15.30	--	--	10.12	5.18	--	--	9.94	5.36	--	--	--	--	9.63	5.67	--	--
MW-118D	70 - 80	15.15	10.03	5.12	10.00	5.15	10.73	4.42	9.82	5.33	--	--	10.20	4.95	9.47	5.68	--	--
MW-119S	5 - 20	11.74	--	--	4.70	7.04	--	--	4.31	7.43	--	--	--	--	4.16	7.58	--	--
MW-119T	42 - 47	11.67	--	--	6.25	5.42	--	--	6.11	5.56	--	--	--	--	5.80	5.87	--	--
MW-120S	5 - 20	12.54	--	--	4.26	8.28	--	--	4.19	8.35	--	--	--	--	3.54	9.00	--	--
MW-120D	28 - 38	12.45	--	--	3.40	9.05	--	--	4.41	8.04	--	--	--	--	3.10	9.35	--	--
MW-121S	5 - 20	12.44	--	--	6.93	5.51	--	--	5.95	6.49	--	--	--	--	6.77	5.67	--	--
MW-121D	32 - 47	12.81	7.55	5.26	7.41	5.4	8.13	4.68	7.35	5.46	--	--	7.27	5.54	7.01	5.80	--	--
MW-122	4 - 16	16.42	13.16	3.26	13.14	3.28	13.12	3.3	13.12	3.30	--	--	13.04	3.38	13.15	3.27	--	--
GEO-1	5 - 20	25.88	--	--	11.50	14.38	--	--	11.19	14.69	--	--	--	--	10.69	15.19	--	--
GEO-2	5 - 20	26.54	--	--	12.19	14.35	--	--	11.99	14.55	--	--	--	--	11.34	15.20	--	--
GEO-3	5 - 20	25.64	--	--	11.57	14.07	--	--	11.10	14.54	--	--	--	--	9.92	15.72	--	--
GEO-4	4 - 19	21.69	--	--	11.29	10.4	--	--	11.09	10.6	--	--	--	--	10.17	11.52	--	--
GEO-5	5 - 20	20.14	--	--	10.45	9.69	--	--	10.25	9.89	--	--	--	--	9.29	10.85	--	--
GEO-6	5 - 20	17.62	--	--	8.56	9.06	--	--	8.30	9.32	--	--	--	--	7.84	9.78	--	--
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	--	--	13.13	11.14	--	--	12.95	11.32	--	--	--	--	12.41	11.86	--	--
SH-MW2R	10 - 23	24.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	--	--	11.43	10.88	--	--	11.23	11.08	--	--	--	--	10.55	11.76	--	--
MW201	11 - 21	27.51	--	--	13.15	14.36	--	--	12.97	14.54	--	--	--	--	12.40	15.11	--	--
MW202	10.5 - 20.5	27.82	--	--	13.54	14.28	--	--	13.32	14.50	--	--	--	--	12.93	14.89	--	--
MW203	6 - 18	21.80	--	--	13.15	8.65	--	--	12.92	8.88	--	--	--	--	12.05	9.75	--	--
MW203R	13 - 23	24.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

- General Notes:**
1. ft = feet.
 2. bgs = below ground surface.
 3. ID = identification.
 4. GW = groundwater.
 5. NAVD = North American Vertical Datum of 1988.
 6. The top of the PVC riser was used as the measuring point for depth to groundwater.
 7. "-" = Well not yet installed, abandoned, or not measured.
 8. NM = Not measured.

Table 9-1. Groundwater Elevations
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	11/19/15		4/27/16		11/21/16		4/14/17		11/8/17		1/31/18		4/2/18		11/15/18	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-101	9 - 19	26.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-102	6 - 16	18.89	--	--	8.02	10.87	--	--	--	--	--	--	7.94	10.95	7.58	11.31	--	--
MW-103	6 - 16	19.47	--	--	11.49	7.98	--	--	--	--	--	--	11.12	8.35	10.81	8.66	--	--
MW-104	5 - 15	17.67	--	--	10.63	7.04	--	--	9.05	8.62	--	--	11.99	5.68	9.21	8.46	--	--
MW-104R	5 - 15	15.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-105	19 - 29	38.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-106	9 - 19	26.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-107	2 - 12	14.63	--	--	4.49	10.14	--	--	4.51	10.12	--	--	4.56	10.07	4.51	10.12	--	--
MW-108	2 - 12	12.74	--	--	4.11	8.63	--	--	3.78	8.96	--	--	4.02	8.72	4.05	8.69	--	--
MW-109	3 - 13	24.12	--	--	11.25	12.87	--	--	9.86	14.26	--	--	11.02	13.10	10.51	13.61	--	--
MW-110	3 - 13	15.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-111	4 - 14	18.95	--	--	11.50	7.45	--	--	Dry	Dry	--	--	Dry	Dry	NF	NF	--	--
MW-111R	5 - 15	18.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	3 - 10	18.16	--	--	--	--	--	--	6.44	11.72	--	--	--	--	--	--	--	--
MW-112a	4 - 19	17.78	--	--	11.14	6.64	13.12	4.66	12.88	4.90	15.32	2.46	12.85	4.93	--	--	13.09	4.69
MW-113	10 - 20	26.16	--	--	11.65	14.51	--	--	10.83	15.33	--	--	13.90	12.26	11.35	14.81	--	--
MW-114	7 - 17	29.43	--	--	12.45	16.98	--	--	10.70	18.73	--	--	12.89	16.54	11.29	18.14	--	--
MW-115	10 - 25	27.15	--	--	18.23	8.92	--	--	17.33	9.82	--	--	18.17	8.98	17.66	9.49	--	--
MW-116	5 - 15	13.45	--	--	9.34	4.11	--	--	9.18	4.27	--	--	9.22	4.23	9.14	4.31	--	--
MW-117S	5 - 20	21.94	--	--	14.09	7.85	--	--	12.49	9.45	--	--	16.65	5.29	13.07	8.87	--	--
MW-117T	35 - 45	21.87	--	--	15.59	6.28	--	--	14.36	7.51	--	--	17.76	4.11	14.75	7.12	--	--
MW-117D	60 - 70	21.78	--	--	--	--	--	--	12.93	8.85	--	--	12.11	9.67	13.5	8.28	--	--
MW-118S	3 - 14	15.52	--	--	9.30	6.22	--	--	8.37	7.15	--	--	12.17	3.35	8.75	6.77	--	--
MW-118T	39.5 - 49.5	15.30	--	--	10.37	4.93	--	--	9.80	5.5	--	--	12.45	2.85	9.96	5.34	--	--
MW-118D	70 - 80	15.15	11.99	3.16	10.20	4.95	10.42	4.73	9.61	5.54	10.27	4.88	--	--	9.74	5.41	9.23	5.92
MW-119S	5 - 20	11.74	--	--	4.64	7.10	--	--	4.43	7.31	--	--	--	--	4.56	7.18	--	--
MW-119T	42 - 47	11.67	--	--	6.43	5.24	--	--	5.95	5.72	--	--	--	--	6.12	5.55	--	--
MW-120S	5 - 20	12.54	--	--	3.16	9.38	--	--	3.91	8.63	--	--	5.72	6.82	3.97	8.57	--	--
MW-120D	28 - 38	12.45	--	--	3.68	8.77	--	--	3.19	9.26	--	--	6.30	6.15	3.41	9.04	--	--
MW-121S	5 - 20	12.44	--	--	--	--	--	--	7.73	4.71	--	--	7.76	4.68	7.32	5.12	--	--
MW-121D	32 - 47	12.81	8.83	3.98	--	--	7.85	4.96	7.17	5.64	7.75	5.06	7.50	5.31	7.74	5.07	6.79	6.02
MW-122	4 - 16	16.42	13.23	3.19	13.19	3.23	13.21	3.21	13.18	3.24	13.17	3.25	13.19	3.23	13.13	3.29	13.17	3.25
GEO-1	5 - 20	25.88	--	--	11.39	14.49	--	--	10.75	15.13	--	--	--	--	11.11	14.77	--	--
GEO-2	5 - 20	26.54	--	--	12.18	14.36	--	--	11.51	15.03	--	--	--	--	11.83	14.71	--	--
GEO-3	5 - 20	25.64	--	--	--	--	--	--	10.25	15.39	--	--	11.40	14.24	10.79	14.85	--	--
GEO-4	4 - 19	21.69	--	--	11.61	10.08	--	--	10.59	11.1	--	--	11.20	10.49	11.20	10.49	--	--
GEO-5	5 - 20	20.14	--	--	10.94	9.20	--	--	9.81	10.33	--	--	10.44	9.70	10.2	9.94	--	--
GEO-6	5 - 20	17.62	--	--	9.72	7.90	--	--	8.42	9.2	--	--	9.12	8.50	8.67	8.95	--	--
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	--	--	--	--	--	--	--	--	--	--	--	--	12.84	11.43	--	--
SH-MW2R	10 - 23	24.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW201	11 - 21	27.51	--	--	13.15	14.36	--	--	--	--	--	--	15.36	12.15	13.34	14.17	--	--
MW202	10.5 - 20.5	27.82	--	--	13.53	14.29	--	--	--	--	--	--	15.77	12.05	12.86	14.96	--	--
MW203	6 - 18	21.80	--	--	13.93	7.87	--	--	--	--	--	--	15.76	6.04	12.98	8.82	--	--
MW203R	13 - 23	24.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

- General Notes:**
- ft = feet.
 - bgs = below ground surface.
 - ID = identification.
 - GW = groundwater.
 - NAVD = North American Vertical Datum of 1988.
 - The top of the PVC riser was used as the measuring point for depth to groundwater.
 - "-" = Well not yet installed, abandoned, or not measured.
 - NM = Not measured.

Table 9-1. Groundwater Elevations
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	4/15/19		11/22/19		4/13/20		11/18/20		4/12/21		11/30/21		4/12/22		11/29/22	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-101	9 - 19	26.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-102	6 - 16	18.89	7.21	11.68	--	--	7.37	11.52	--	--	8.13	10.76	--	--	--	--	--	--
MW-103	6 - 16	19.47	7.26	12.21	--	--	10.70	8.77	--	--	11.90	7.57	--	--	--	--	--	--
MW-104	5 - 15	17.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-104R	5 - 15	15.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-105	19 - 29	38.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-106	9 - 19	26.33	--	--	--	--	--	--	--	--	NM- Flooded	--	--	--	--	--	--	--
MW-107	2 - 12	14.63	4.74	9.89	--	--	4.42	10.21	--	--		4.48	10.15	--	--	--	--	--
MW-108	2 - 12	12.74	3.95	8.79	--	--	3.86	8.88	--	--		4.05	8.69	--	--	--	--	--
MW-109	3 - 13	24.12	10.62	13.5	--	--	10.41	13.71	--	--		11.31	12.81	--	--	--	--	--
MW-110	3 - 13	15.58	--	--	--	--	--	--	--	--	--	1.99	13.59	--	--	--	--	--
MW-111	4 - 14	18.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-111R	5 - 15	18.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	3 - 10	18.16	5.05	13.11	--	--	6.75	11.41	--	--	8.06	10.1	--	--	--	--	--	--
MW-112a	4 - 19	17.78	12.3	5.48	13.00	4.78	12.75	5.03	13.08	4.70	13.05	4.73	12.80	4.98	12.55	5.23	12.81	4.97
MW-113	10 - 20	26.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-114	7 - 17	29.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-115	10 - 25	27.15	16.96	10.19	--	--	17.89	9.26	--	--	19.4	7.75	--	--	--	--	--	--
MW-116	5 - 15	13.45	8.35	5.1	--	--	9.17	4.28	--	--	9.51	3.94	--	--	9	4.45	--	--
MW-117S	5 - 20	21.94	9.19	12.75	--	--	12.69	9.25	--	--	13.51	8.43	--	--	12.8	9.14	--	--
MW-117T	35 - 45	21.87	14.46	7.41	--	--	16.06	5.81	--	--	16.35	5.52	--	--	16	5.87	--	--
MW-117D	60 - 70	21.78	11.76	10.02	--	--	10.11	11.67	--	--	16.31	5.47	--	--	15.6	6.18	--	--
MW-118S	3 - 14	15.52	9.84	5.68	--	--	8.85	6.67	--	--	8.95	6.57	--	--	9.1	6.42	--	--
MW-118T	39.5 - 49.5	15.30	9.52	5.78	--	--	10.24	5.06	--	--	10.77	4.53	--	--	10.6	4.7	--	--
MW-118D	70 - 80	15.15	9.31	5.84	10.49	4.66	10.09	5.06	10.65	4.5	10.59	4.56	10.55	4.6	10.2	4.95	10.97	4.18
MW-119S	5 - 20	11.74	4.05	7.69	--	--	3.49	8.25	--	--	4.20	7.54	--	--	4.05	7.69	--	--
MW-119T	42 - 47	11.67	5.86	5.81	--	--	6.20	5.47	--	--	6.85	4.82	--	--	6.7	4.97	--	--
MW-120S	5 - 20	12.54	3.85	8.69	--	--	3.35	9.19	--	--	4.30	8.24	--	--	5	7.54	--	--
MW-120D	28 - 38	12.45	3.21	9.24	--	--	3.93	8.52	--	--	3.81	8.64	--	--	4.5	7.95	--	--
MW-121S	5 - 20	12.44	6.8	5.64	--	--	7.72	4.72	--	--	7.73	4.71	--	--	8	4.44	--	--
MW-121D	32 - 47	12.81	6.94	5.87	7.66	5.15	7.40	5.41	8	4.81	8.05	4.76	8.15	4.66	7.7	5.11	8.40	4.41
MW-122	4 - 16	16.42	12.81	3.61	13.15	3.27	13.01	3.41	13.11	3.31	13.02	3.4	13.1	3.32	12.9	3.52	13.15	3.27
GEO-1	5 - 20	25.88	11.1	14.78	--	--	10.40	15.48	--	--	11.01	14.87	--	--	10.85	15.03	--	--
GEO-2	5 - 20	26.54	12.98	13.56	--	--	11.11	15.43	--	--	12.26	14.28	--	--	12.2	14.34	--	--
GEO-3	5 - 20	25.64	11.06	14.58	--	--	10.36	15.28	--	--	ND-Bott at 11.15	--	--	--	--	--	--	--
GEO-4	4 - 19	21.69	10.72	10.97	--	--	11.41	10.28	--	--		12.41	9.28	--	--	--	--	--
GEO-5	5 - 20	20.14	7.55	12.59	--	--	11.32	8.82	--	--		12.26	7.88	--	--	--	--	--
GEO-6	5 - 20	17.62	8.23	9.39	--	--	11.62	6	--	--	12.21	5.41	--	--	--	--	--	--
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	12.55	11.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW2R	10 - 23	24.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW201	11 - 21	27.51	12.92	14.59	--	--	12.00	15.51	--	--	12.69	14.82	--	--	--	--	--	--
MW202	10.5 - 20.5	27.82	13.3	14.52	--	--	12.31	15.51	--	--	12.99	14.83	--	--	12.9	14.92	--	--
MW203	6 - 18	21.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW203R	13 - 23	24.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

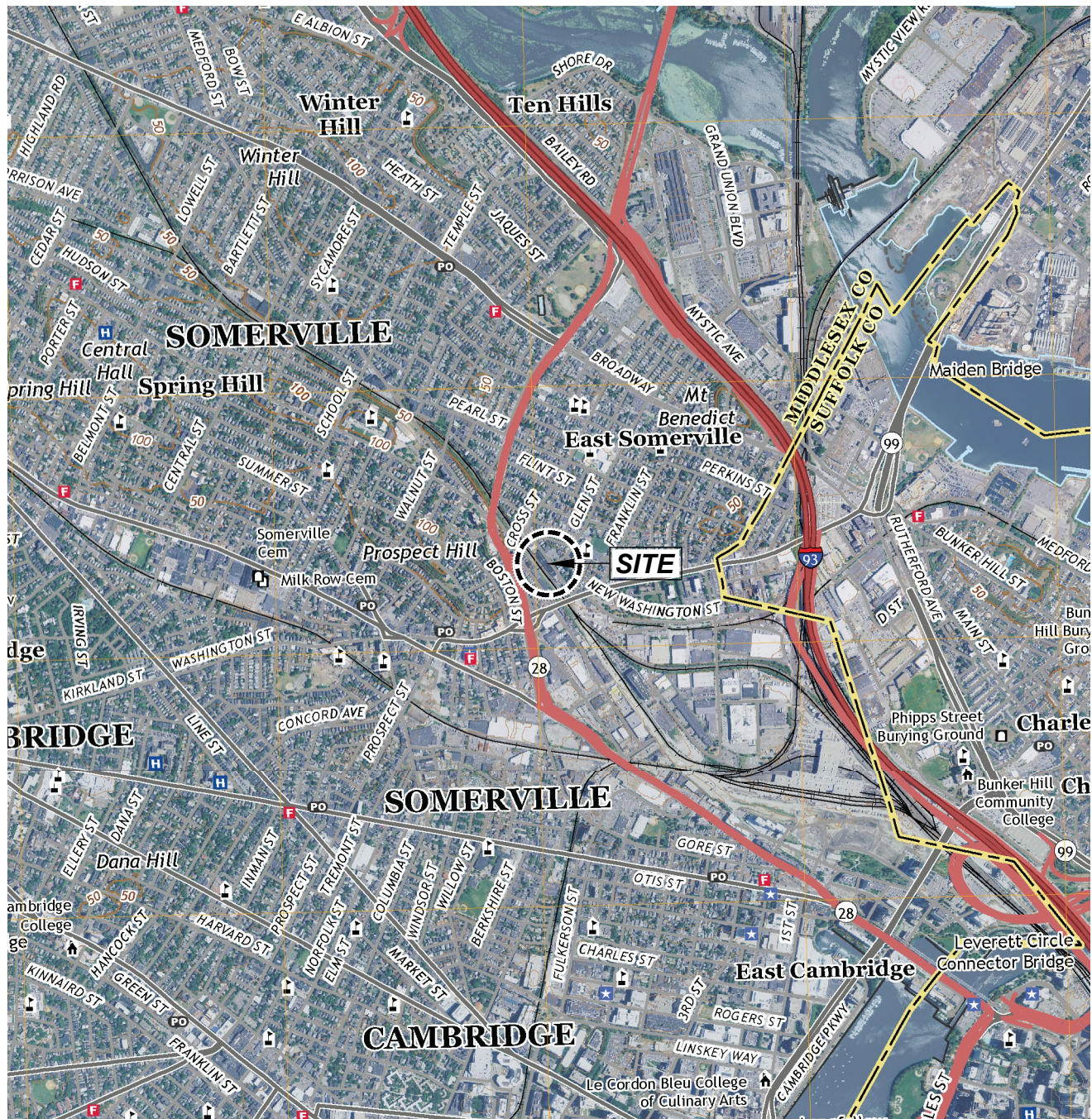
- General Notes:**
- ft = feet.
 - bgs = below ground surface.
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 - GW = groundwater.
 - NAVD = North American Vertical Datum of 1988.
 - The top of the PVC riser was used as the measuring point for depth to groundwater.
 - "-" = Well not yet installed, abandoned, or not measured.
 - NM = Not measured.

Table 9-1. Groundwater Elevations
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42
50 Tufts Street
Somerville, Massachusetts

		Gauging Date:	4/17/23		11/7/23		4/1/24		9/20/24		11/14/24		12/13/24	
Monitoring Well ID	Well Screen Interval (ft bgs)	Elevation of Measuring Point (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)	Depth to GW (ft)	Elevation of GW (ft NAVD)
MW-1	unknown	25.90	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	unknown	25.38	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	unknown	25.31	--	--	--	--	--	--	--	--	--	--	--	--
MW-101	9 - 19	26.75	--	--	--	--	--	--	--	--	--	--	--	--
MW-102	6 - 16	18.89	8.18	10.71	--	--	6.91	11.98	--	--	--	--	--	--
MW-103	6 - 16	19.47	--	--	--	--	10.49	8.98	--	--	--	--	--	--
MW-104	5 - 15	17.67	--	--	--	--	--	--	--	--	--	--	--	--
MW-104R	5 - 15	15.82	--	--	--	--	15.8	0.02	14.95	0.87	15	0.82	--	--
MW-105	19 - 29	38.84	--	--	--	--	--	--	--	--	--	--	--	--
MW-106	9 - 19	26.33	--	--	--	--	10.45	15.88	--	--	--	--	--	--
MW-107	2 - 12	14.63	4.43	10.2	--	--	4.34	10.29	--	--	--	--	--	--
MW-108	2 - 12	12.74	4.34	8.4	--	--	3.52	9.22	--	--	--	--	--	--
MW-109	3 - 13	24.12	11.49	12.63	--	--	9.75	14.37	--	--	--	--	--	--
MW-110	3 - 13	15.58	2.5	13.08	--	--	0.81	14.77	--	--	--	--	--	--
MW-111	4 - 14	18.95	--	--	--	--	--	--	--	--	--	--	--	--
MW-111R	5 - 15	18.22	--	--	--	--	--	--	--	--	--	--	12.59	5.63
MW-112	3 - 10	18.16	--	--	--	--	--	--	--	--	--	--	--	--
MW-112a	4 - 19	17.78	12.67	5.11	12.64	5.14	12.64	5.14	--	--	13.16	4.62	--	--
MW-113	10 - 20	26.16	--	--	--	--	--	--	--	--	--	--	--	--
MW-114	7 - 17	29.43	--	--	--	--	--	--	--	--	--	--	--	--
MW-115	10 - 25	27.15	19.61	7.54	--	--	18.12	9.03	--	--	--	--	--	--
MW-116	5 - 15	13.45	9.03	4.42	--	--	--	--	--	--	--	--	--	--
MW-117S	5 - 20	21.94	11.19	10.75	--	--	11.62	10.32	--	--	--	--	--	--
MW-117T	35 - 45	21.87	16.1	5.77	--	--	15.09	6.78	--	--	--	--	--	--
MW-117D	60 - 70	21.78	16.07	5.71	--	--	11.61	10.17	--	--	--	--	--	--
MW-118S	3 - 14	15.52	9.17	6.35	--	--	8.01	7.51	--	--	--	--	--	--
MW-118T	39.5 - 49.5	15.30	10.6	4.7	--	--	9.91	5.39	--	--	--	--	--	--
MW-118D	70 - 80	15.15	10.5	4.65	10.62	4.53	9.75	5.4	--	--	11.19	3.96	--	--
MW-119S	5 - 20	11.74	5.1	6.64	--	--	4.07	7.67	--	--	--	--	--	--
MW-119T	42 - 47	11.67	6.73	4.94	--	--	5.98	5.69	--	--	--	--	--	--
MW-120S	5 - 20	12.54	4.31	8.23	--	--	3.42	9.12	--	--	--	--	--	--
MW-120D	28 - 38	12.45	3.81	8.64	--	--	3.06	9.39	--	--	--	--	--	--
MW-121S	5 - 20	12.44	7.58	4.86	--	--	4.07	8.37	--	--	--	--	--	--
MW-121D	32 - 47	12.81	8.05	4.76	NM	NM	7.17	5.64	--	--	8.70	4.11	--	--
MW-122	4 - 16	16.42	13.1	3.32	13.12	3.3	13.02	3.4	--	--	13.18	3.24	--	--
GEO-1	5 - 20	25.88	11.16	14.72	--	--	9.91	15.97	--	--	--	--	--	--
GEO-2	5 - 20	26.54	12.1	14.44	--	--	10.6	15.94	--	--	--	--	--	--
GEO-3	5 - 20	25.64	--	--	--	--	--	--	--	--	--	--	--	--
GEO-4	4 - 19	21.69	12.83	8.86	--	--	10.71	10.98	--	--	--	--	--	--
GEO-5	5 - 20	20.14	12.79	7.35	--	--	10.44	9.7	--	--	--	--	--	--
GEO-6	5 - 20	17.62	12.75	4.87	--	--	10.75	6.87	--	--	--	--	--	--
SH-1	9 - 14	29.55	--	--	--	--	--	--	--	--	--	--	--	--
SH-2	7 - 14	29.64	--	--	--	--	--	--	--	--	--	--	--	--
SH-3	8 - 13	29.66	--	--	--	--	--	--	--	--	--	--	--	--
SH-4	11 - 16	29.63	--	--	--	--	--	--	--	--	--	--	--	--
SH-5	8 - 13	29.63	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW1	10 - 30	24.02	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW2	10 - 25	24.27	--	--	--	--	--	--	--	--	--	--	--	--
SH-MW2R	10 - 23	24.56	--	--	--	--	13.54	11.02	--	--	--	--	--	--
SH-MW3	10 - 24	22.31	--	--	--	--	--	--	--	--	--	--	--	--
MW201	11 - 21	27.51	13.84	13.67	--	--	11.62	15.89	--	--	--	--	--	--
MW202	10.5 - 20.5	27.82	13.2	14.62	--	--	12.11	15.71	--	--	--	--	--	--
MW203	6 - 18	21.80	--	--	--	--	--	--	--	--	--	--	--	--
MW203R	13 - 23	24.97	--	--	--	--	19.15	5.82	--	--	--	--	--	--

- General Notes:
- ft = feet.
 - bgs = below ground surface.
 - ID = identification.
 - GW = groundwater.
 - NAVD = North American Vertical Datum of 1988.
 - The top of the PVC riser was used as the measuring point for depth to groundwater.
 - "-" = Well not yet installed, abandoned, or not measured.
 - NM = Not measured.

Figures



This Image is from U.S.G.S. Topographic 7.5 Minute Series
 Boston North, MA Quadrangle, 2018.
 Datum is North American Vertical Datum of 1988 (NAVD88).
 Contour Interval is 10 Feet.



Phase V Status Report No. 27 and
 Remedial Monitoring Report No. 42
 50 Tufts Street Somerville, Massachusetts

UniFirst Corporation
 Wilmington, Massachusetts

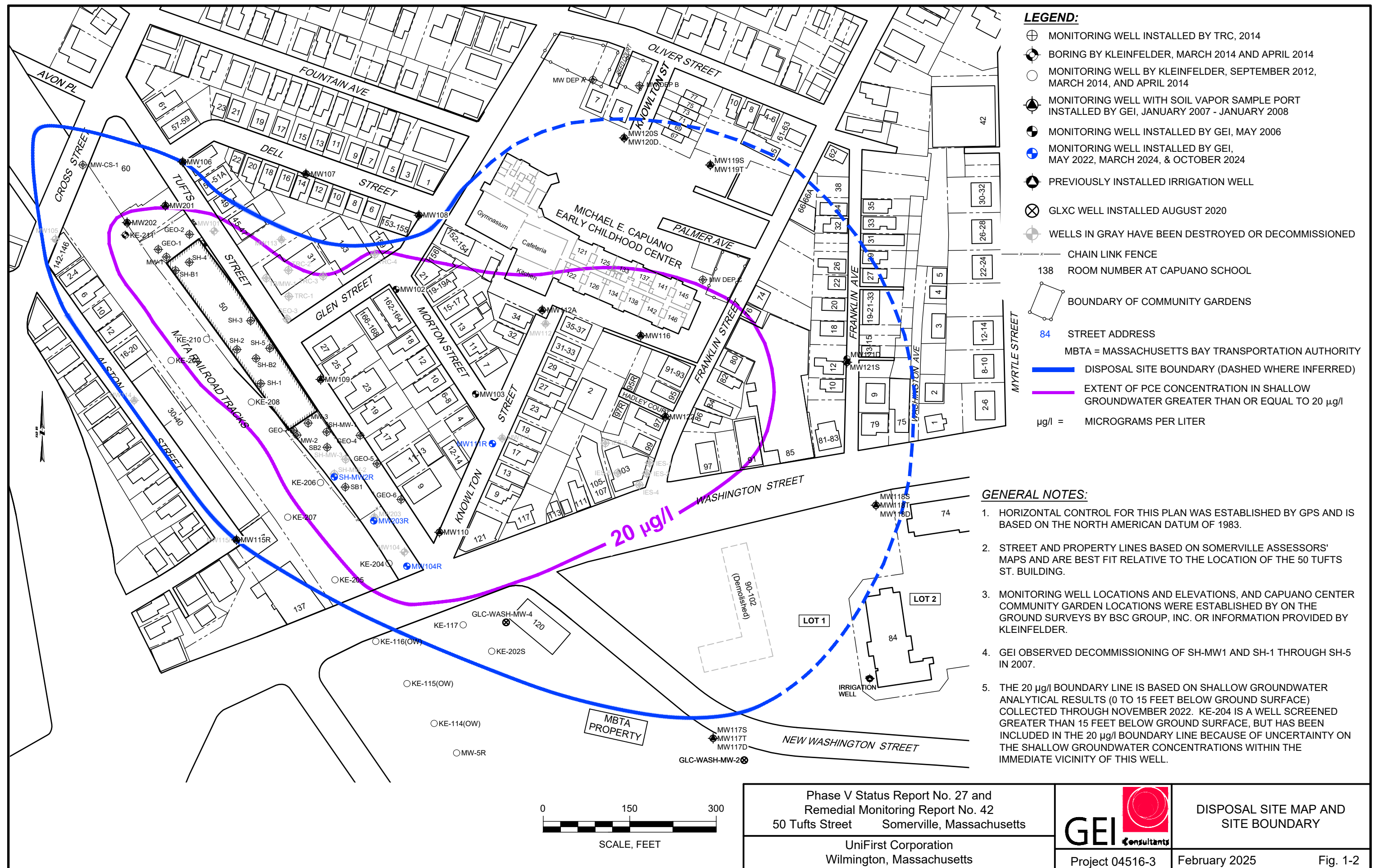


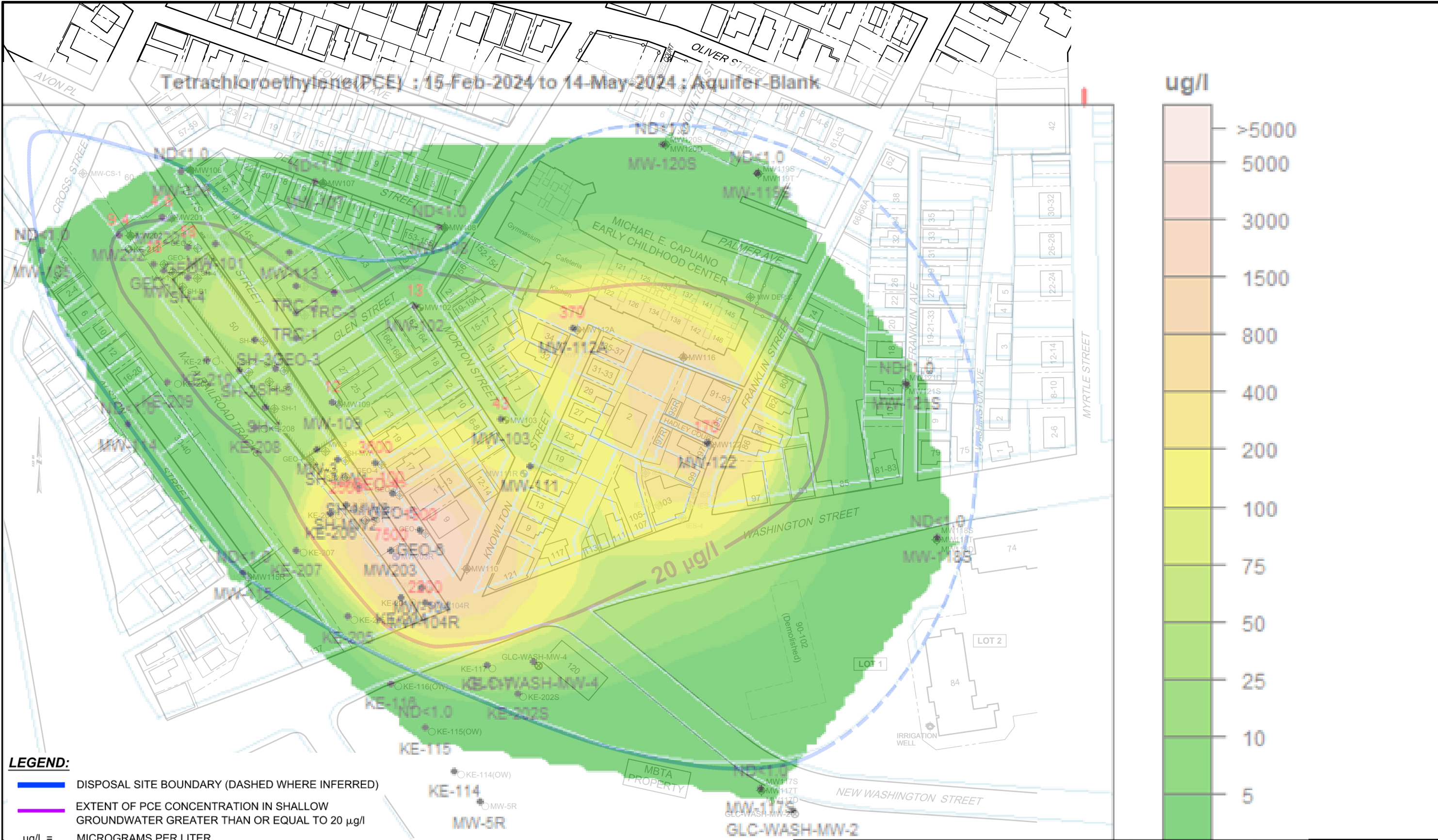
Project 04516-3

SITE LOCATION MAP

February 2025

Fig. 1-1







LEGEND

PCE CONCENTRATIONS

Not Detected

Less than RCS-1

Greater than RCS-1 (1 mg/kg)(Detected concentration presented in mg/kg)

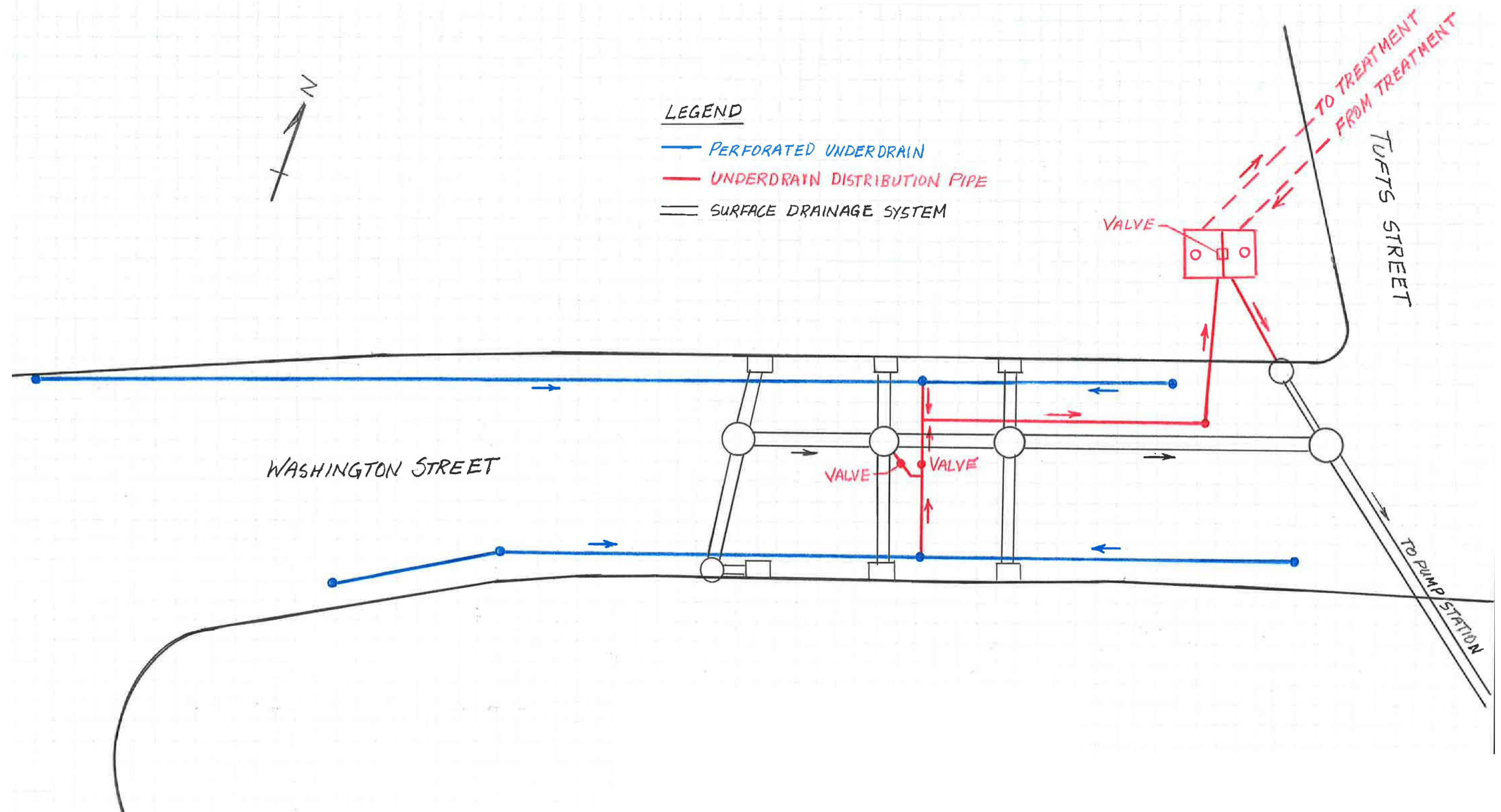
DISPOSAL SITE BOUNDARY

NOTES

1. Historic soil characterization samples reportedly collected between 2010 and 2014 by Vanasse Hangen Brustlin, Inc., Nobis Group, and Kleinfelder, Inc. Source: Green Line Extension Project Release Abatement Measure (RAM) Plan Historic Fill and Soil Impacted by Railroad Operations - Special Project Designation, dated February 2015 (Kleinfelder).

2. More recent soil characterization samples collected between 2018 and 2020 by TRC Companies, Inc.

Phase V Status Report No. 27 and Remedial Monitoring Report No. 42 50 Tufts Street Somerville, Massachusetts		GEI Consultants	KLEINFELDER SOIL DATA AND GLX PROJECT PRE- CHARACTERIZATION SAMPLES	
UniFirst Corporation Wilmington, Massachusetts			Project 04516-3	February 2025 Fig. 2-2



NOT TO SCALE

Phase V Status Report No. 27 and
Remedial Monitoring Report No. 42
50 Tufts Street Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

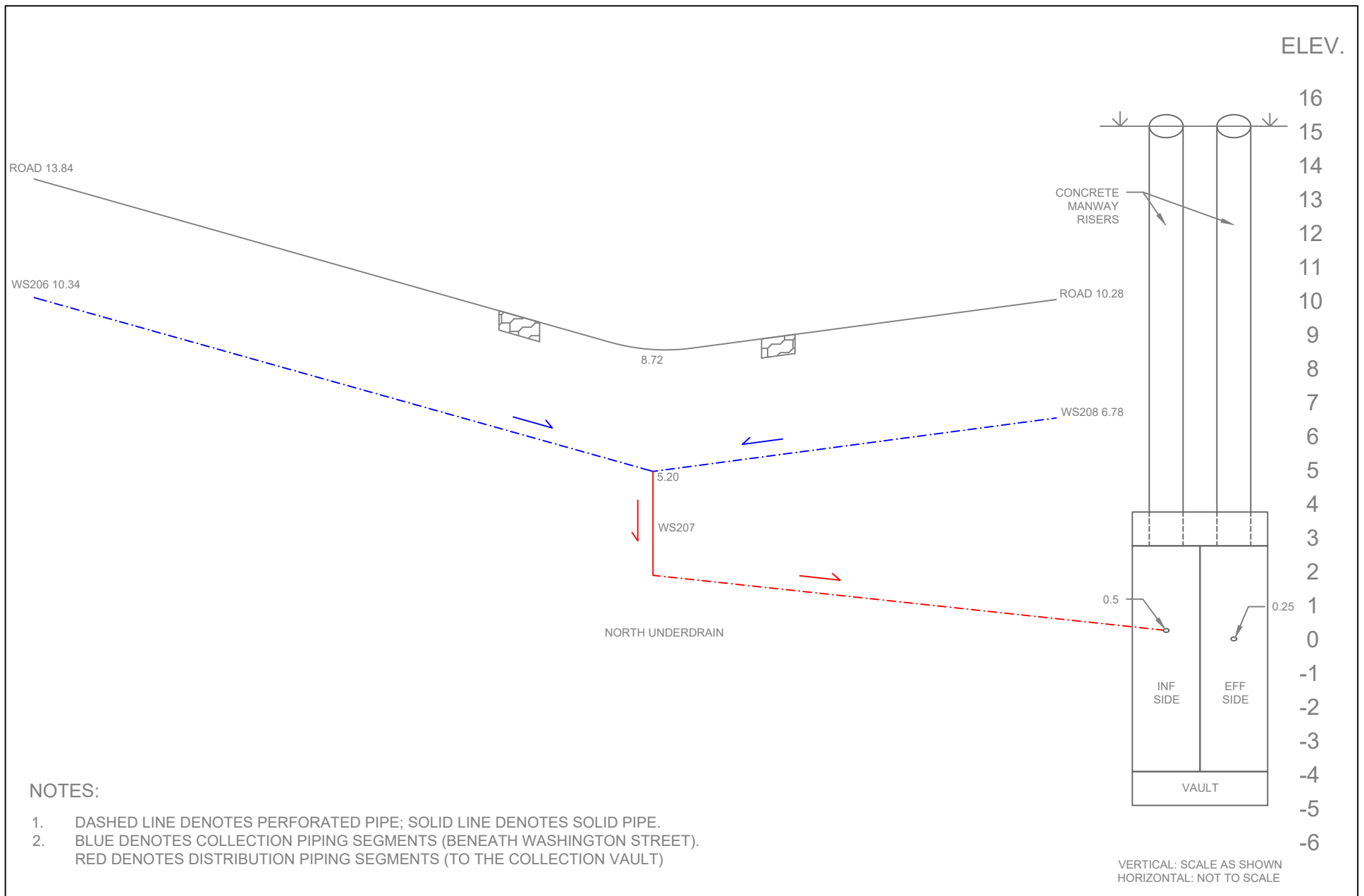


Project 04516-3

UNDERDRAINAGE PIPING
PLAN SCHEMATIC

February 2025

Fig. 2-3



Phase V Status Report No. 27 and
Remedial Monitoring Report No. 42
50 Tufts Street Somerville, Massachusetts

Unifirst Corporation
Wilmington, Massachusetts

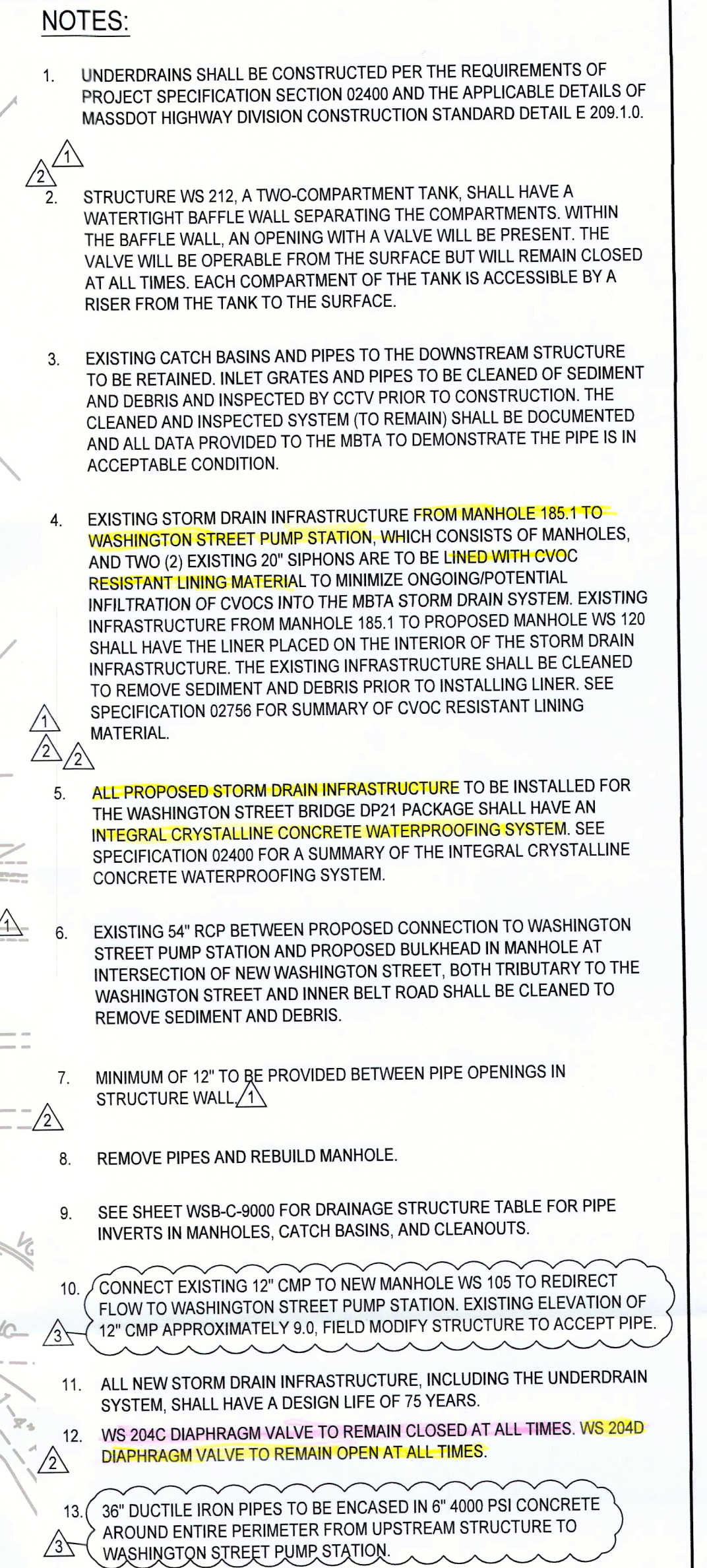


Project 04516-3

WASHINGTON STREET
UNDERDRAIN COLLECTION
SYSTEM PIPING ELEVATION
SCHEMATIC

February 2025

Fig. 2-4



1"=20'

20' 0 20'

	MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
	GREEN LINE EXTENSION PROJECT MBTA CONTRACT NO. E22CN07 CAMBRIDGE / SOMERVILLE / MEDFORD, MASSACHUSETTS

GLX
CONSTRUCTORS



COMMONWEALTH OF MASSACHUSETTS
JAMES D. TAKACS
CIVIL
NO. 54416
REGISTERED
Professional Engineer

8/4/19



STV ¹⁰⁰*Years*

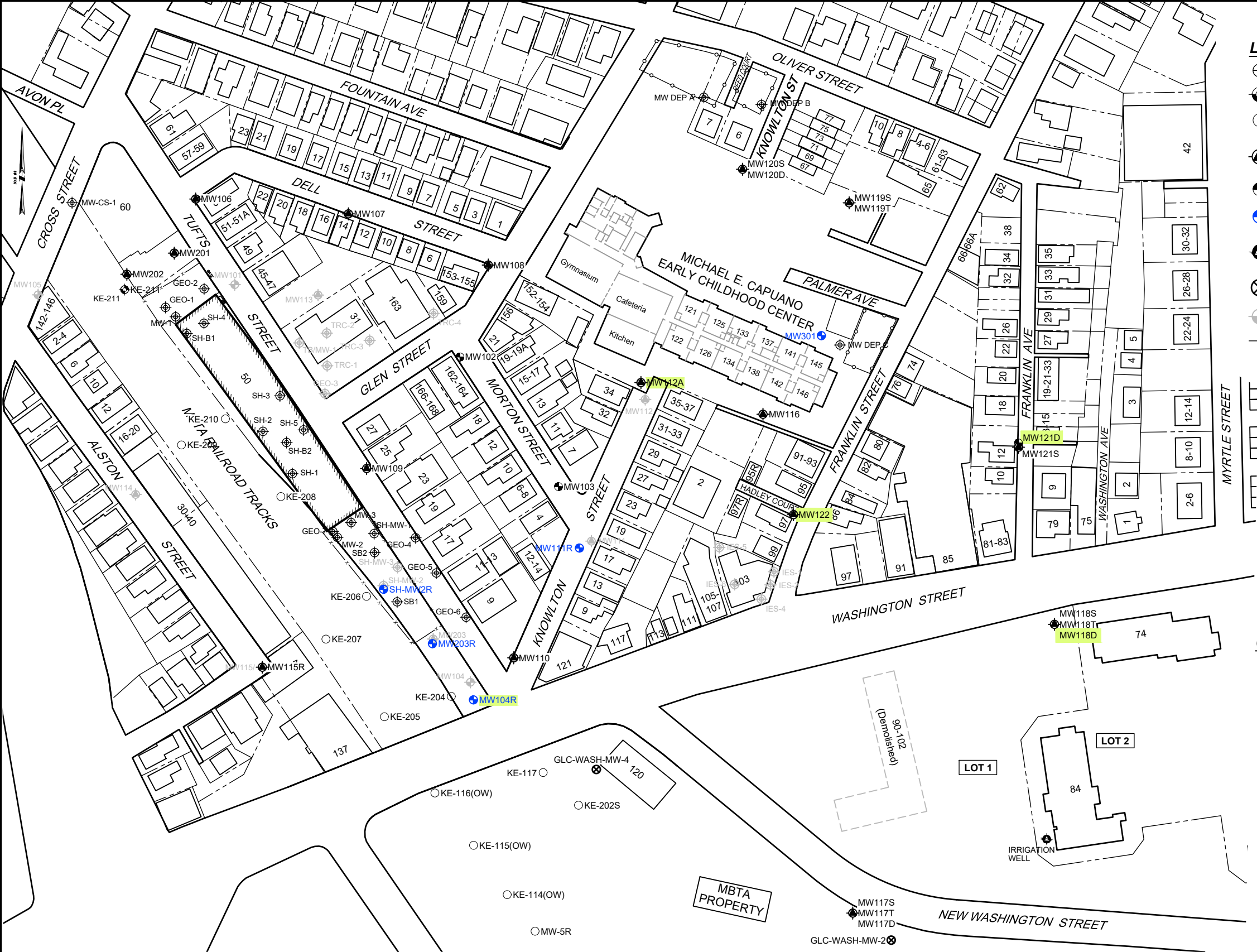


massDOT
 Massachusetts Department of Transportation



GLX
CONSTRUCTORS

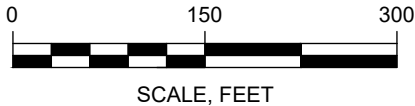
ISSUE	DATE	DESCRIPTION	BY	CHKD	APP.	SCALE	DRAWN BY	DESIGN BY	CHECK BY	PLAN NO.:	SHEET:	ISSUE
3	9/04/19	DCN-DP21-004	KPO	JDT	JDT	AS NOTED	MCS	KPO	JDT	221022	WSB-C-2004	3
2	5/02/19	DCN-DP21-002	KPO	JDT	JDT							
1	2/01/19	DCN-DP21-001	KPO	JDT	JDT							



LEGEND:

- ⊕ MONITORING WELL INSTALLED BY TRC, 2014
- ⦿ BORING BY KLEINFELDER, MARCH 2014 AND APRIL 2014
- MONITORING WELL BY KLEINFELDER, SEPTEMBER 2012, MARCH 2014, AND APRIL 2014
- ⦿ MONITORING WELL WITH SOIL VAPOR SAMPLE PORT INSTALLED BY GEI, JANUARY 2007 - JANUARY 2008
- ⦿ MONITORING WELL INSTALLED BY GEI, MAY 2006
- ⦿ MONITORING WELL INSTALLED BY GEI, MAY 2022, MARCH 2024, & OCTOBER 2024
- ⦿ PREVIOUSLY INSTALLED IRRIGATION WELL
- ⊗ GLXC WELL INSTALLED AUGUST 2020
- ⦿ WELLS IN GRAY HAVE BEEN DESTROYED OR DECOMMISSIONED
- x — CHAIN LINK FENCE
- 138 ROOM NUMBER AT CAPUANO SCHOOL
- BOUNDARY OF COMMUNITY GARDENS
- 84 STREET ADDRESS
- MBTA = MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
- MONITORING WELL SAMPLED BY GEI DURING THIS REPORTING PERIOD

- GENERAL NOTES:**
1. MONITORING WELL LOCATIONS AND ELEVATIONS, AND CAPUANO CENTER COMMUNITY GARDEN LOCATIONS WERE ESTABLISHED BY ON THE GROUND SURVEYS BY BSC GROUP, INC.
 2. HORIZONTAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN DATUM OF 1983.
 3. VERTICAL CONTROL FOR THIS PLAN WAS ESTABLISHED BY GPS AND IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988.
 4. STREET PROPERTY LINES, AND BUILDINGS ARE BASED ON SOMERVILLE ASSESSORS MAPS AND ARE BEST FIT RELATIVE TO THE LOCATION OF THE 50 TUFTS ST. BUILDING.
 5. GEI OBSERVED ABANDONMENT OF SH-MW1 AND SH-1 THROUGH SH-5 IN 2007.

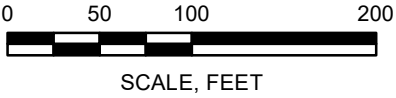


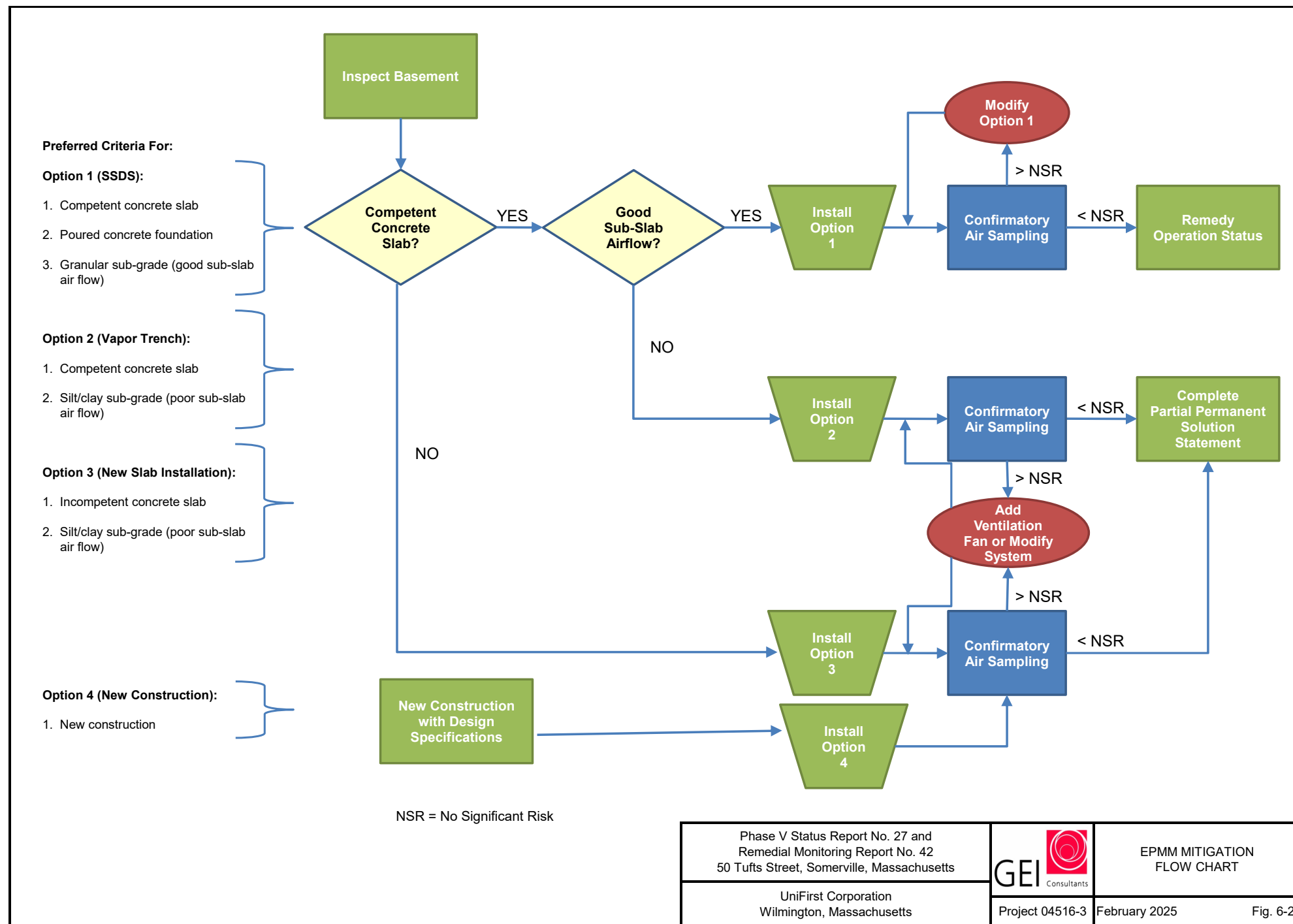
Phase V Status Report No. 27 and Remedial Monitoring Report No. 42 50 Tufts Street Somerville, Massachusetts		MONITORING WELL LOCATIONS	
UniFirst Corporation Wilmington, Massachusetts		Project 04516-3	February 2025 Fig. 4-1

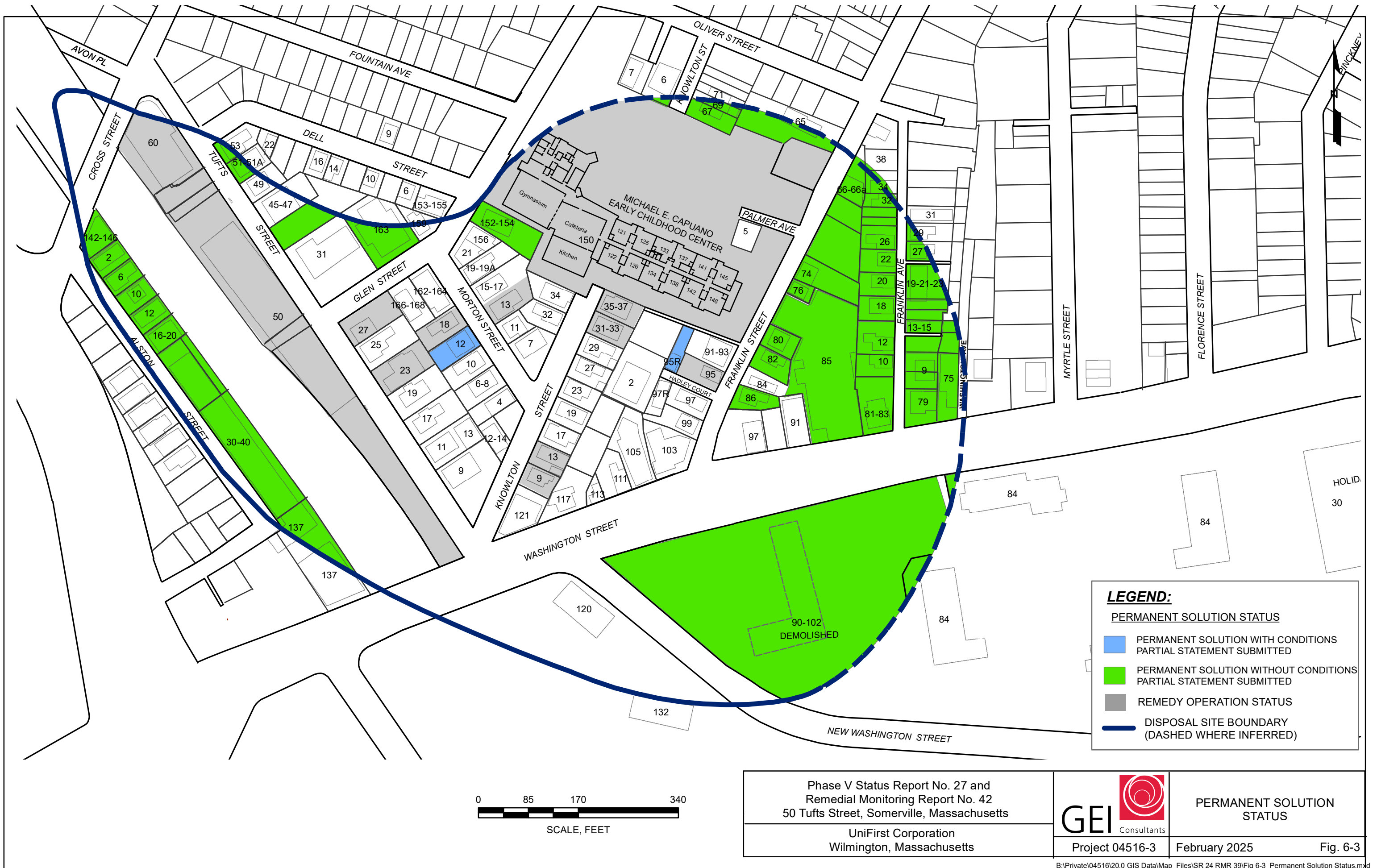


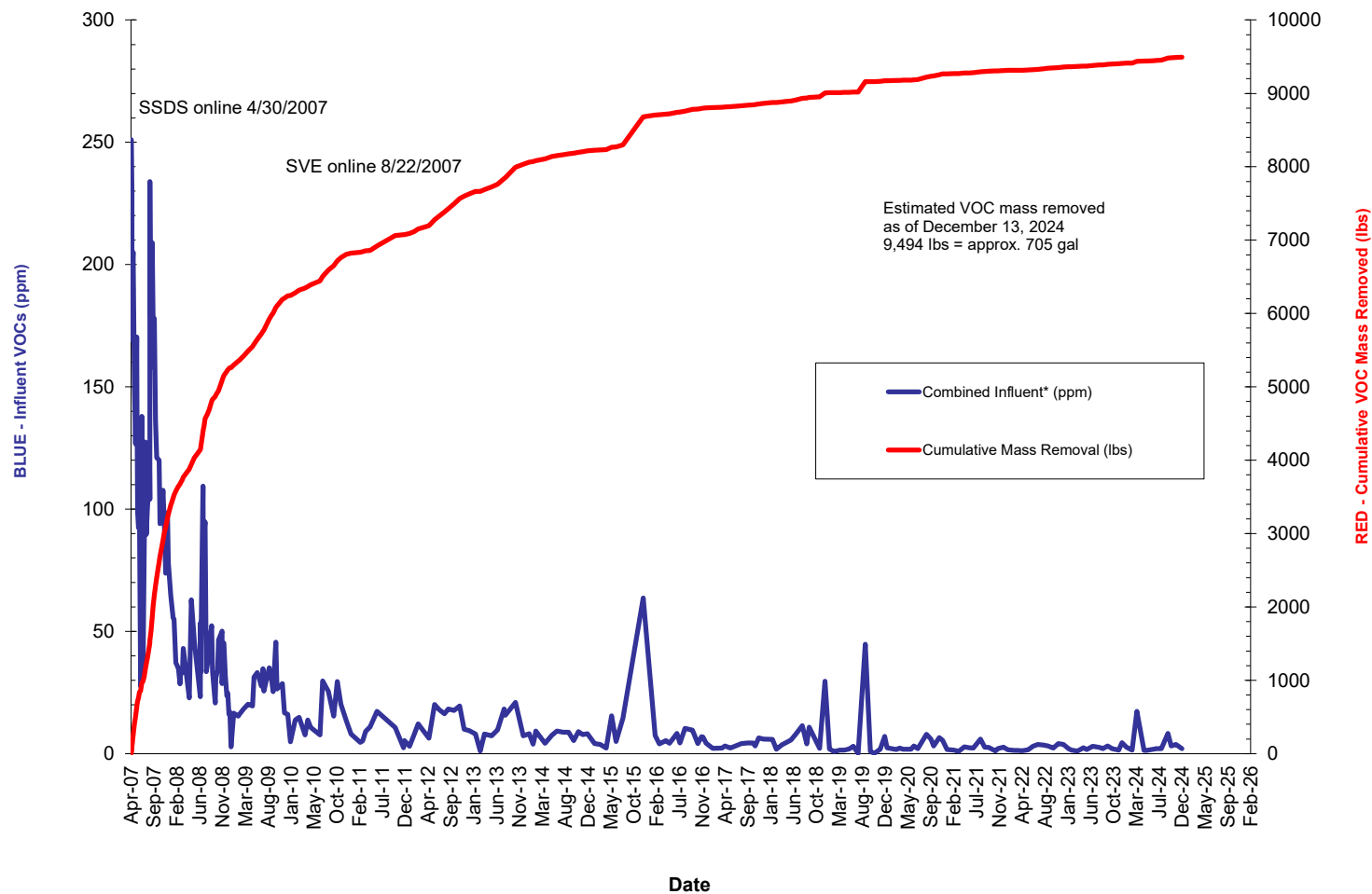


Notes:
1. EPMMs demonstrated to be no longer required based on testing requirements in the MassDEP Vapor Intrusion Guidance: Site Assessment, Mitigation and Closure, Policy #WSC-16-435 (Section 3.7 and Tables 3-1 and 3-2).









General Notes:

lbs = pounds.

PCE = tetrachloroethylene (perchloroethylene).

ppm = parts per million.

SSDS = sub-slab depressurization system.

SVE = soil vapor extraction system.

VOC = volatile organic compound.

*Influent concentrations measured by a photoionization detector (PID).

Phase V Status Report No. 27 and
Remedial Monitoring Report No. 42
50 Tufts Street, Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts

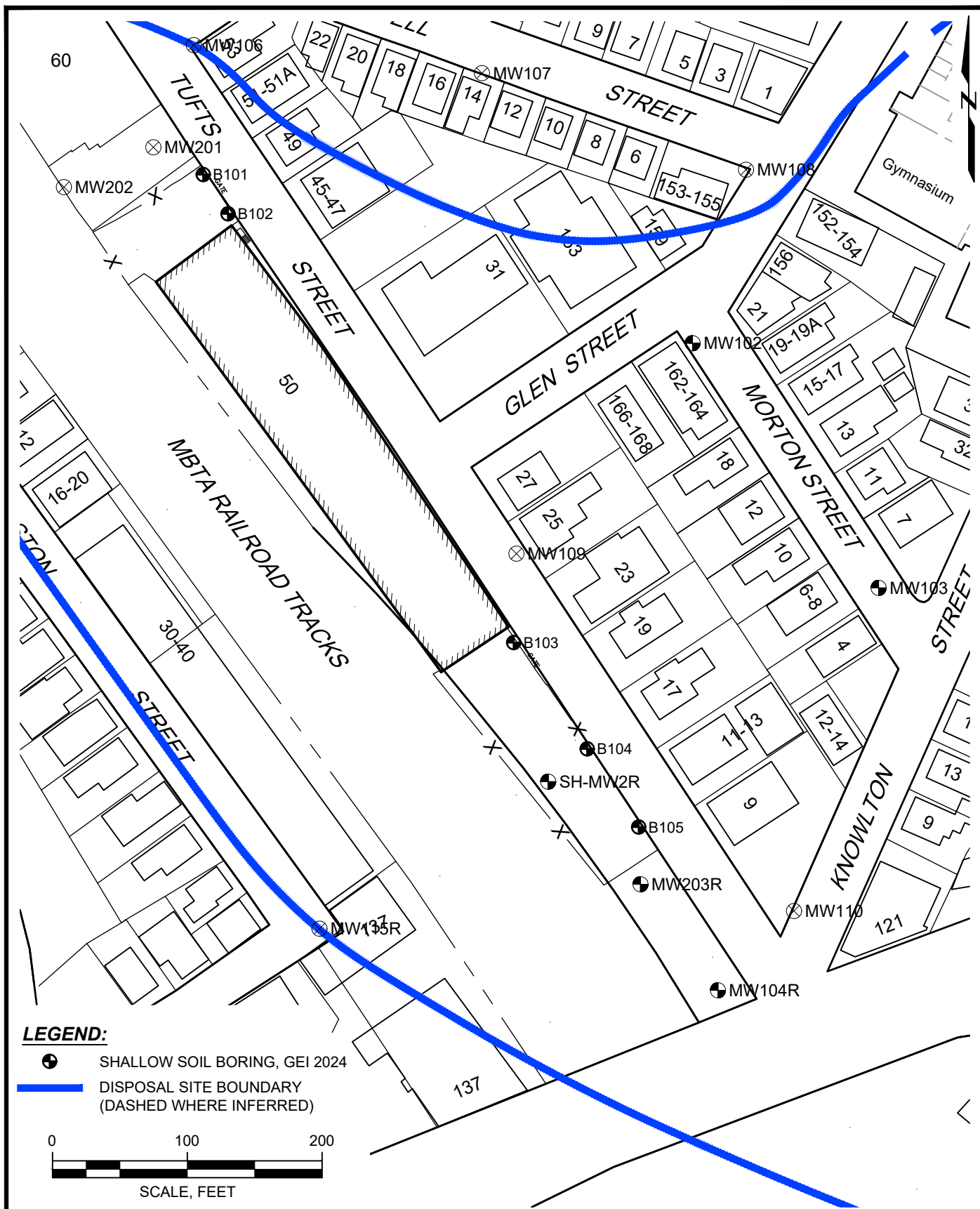


COMBINED INFLUENT VOC
CONCENTRATIONS AND
CUMULATIVE VOC REMOVAL

Project 04516-3

February 2025

Fig. 8-1



Phase V Status Report No. 27 and RMR No. 42
50 Tufts Street
Somerville, Massachusetts

Wooden Teeth LLC
Wilmington, Massachusetts



Project 045163

50 TUFTS STREET
SHALLOW SOIL BORING PLAN

February 2025

Fig. 10-1

Appendix A MassDEP Transmittal Forms (BWSC-108, BWSC-108As, and BWSC-108Bs)

Comprehensive Response Action Transmittal Forms:

- **BWSC-108A 1 of 5 (50 Tufts SSDS)**
- **BWSC-108B 1 of 5 (50 Tufts SSDS)**
- **BWSC-108A 2 of 5 (50 Tufts SVE)**
- **BWSC-108B 2 of 5 (50 Tufts SVE)**
- **BWSC-108A 3 of 5 (Capuano Center)**
- **BWSC-108B 3 of 5 (Capuano Center)**
- **BWSC-108A 4 of 5 (Residences)**
- **BWSC-108A 5 of 5 (MNA)**



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

Release Tracking Number

3 - 23246

A. SITE LOCATION:

1. Site Name: 50 TUFTS ST & PROP ACROSS THE ST
2. Street Address: 50 TUFTS ST
3. City/Town: SOMERVILLE 4. ZIP Code: 021454129

☒ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category:

☐ a. Tier I ☐ b. Tier ID ☒ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

- ☐ 1. Submit a **Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
- ☐ 2. Submit a **Revised Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
- ☐ 3. Submit a **Phase II Scope of Work**, pursuant to 310 CMR 40.0834.
- ☐ 4. Submit an **interim Phase II Report**. This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.
- ☐ 5. Submit a **final Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
- ☐ 6. Submit a **Revised Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
- ☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
- ☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
- ☐ 9. Submit a **Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
- ☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
- ☐ 11. Submit an **As-Built Construction Report**, pursuant to 310 CMR 40.0875.
- ☐ 12. Submit a **Phase IV Status Report**, pursuant to 310 CMR 40.0877.
- ☐ 13. Submit a **Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

- ☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Permanent or Temporary Solution.
- ☐ b. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.
- ☐ c. The requirements of a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

3 - 23246

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

- ☐ 14. Submit a **Revised Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.
- ☐ 15. Submit a **Phase V Status Report**, pursuant to 310 CMR 40.0892.
- ☒ 16. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)
- a. Type of Report: (check one) ☐ i. Initial Report ☒ ii. Interim Report ☐ iii. Final Report
- b. Frequency of Submittal: (check all that apply)
- ☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
- ☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
- ☒ iii. A Remedial Monitoring Report(s) submitted every six months, concurrent with a Status Report.
- ☐ iv. A Remedial Monitoring Report(s) submitted, concurrent with a Status Report.
- c. Status of Site: (check one) ☐ i. Phase IV ☒ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution
- d. Number of Remedial Systems and/or Monitoring Programs: 5
- A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.
- ☐ 17. Submit a **Remedy Operation Status**, pursuant to 310 CMR 40.0893.
- ☒ 18. Submit a **Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).
- ☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS)**, pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).
- ☐ a. Submit a **Transfer of Persons Maintaining an ROS** (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").
- ☐ b. Submit a **Modification of Persons Maintaining an ROS** (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").
- c. Number of Persons Maintaining an ROS not including the primary representative: _____
- ☐ 20. Submit a **Termination of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(6). (check one)
- ☐ a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.
- ☐ b. Submit a notice of Termination of ROS.
- ☐ 21. Submit a **Phase V Completion Statement**, pursuant to 310 CMR 40.0894.
- Specify the outcome of Phase V activities: (check one)
- ☐ a. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.
- ☐ b. The requirements for a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.
- ☐ 22. Submit a **Revised Phase V Completion Statement**, pursuant to 310 CMR 40.0894.
- ☐ 23. Submit a **Temporary Solution Status Report**, pursuant to 310 CMR 40.0898.
- ☐ 24. Submit a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).
- a. Status of Site: (check one)
- ☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution



COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

3 - 23246

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

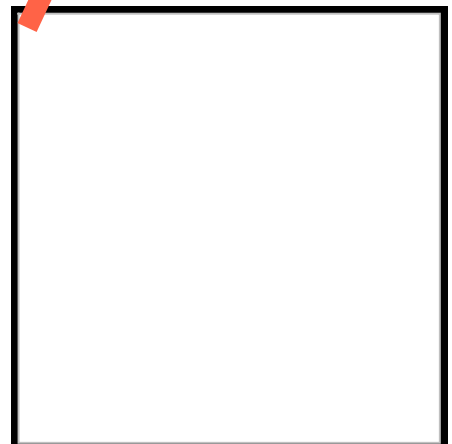
> if Section B indicates that a **Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement** and/or a **Termination of a Remedy Operation Status** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that a **Phase II Scope of Work** or a **Phase IV Remedy Implementation Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that an **As-Built Construction Report**, a **Remedy Operation Status**, a **Phase IV, Phase V or Temporary Solution Status Report**, a **Status Report to Maintain a Remedy Operation Status**, a **Transfer or Modification of Persons Maintaining a Remedy Operation Status** and/or a **Remedial Monitoring Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate, or materially incomplete.

1. LSP#: 9719
2. First Name: ILEENS
3. Last Name: GLADSTONE
4. Telephone: 7817214012
5. Ext.:
6. Email: igladstone@geiconsultants.com
7. Signature:
8. Date: (mm/dd/yyyy)
9. LSP Stamp:





Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

3 - 23246

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions
2. Name of Organization: UNIFIRST CORPORATION
3. Contact First Name: CATHERINE 4. Last Name: MALAGRIDA
5. Street: 68 JONSPIN RD 6. Title: ENV COMPLIANCE MANAGER
7. City/Town: WILMINGTON 8. State: MA 9. ZIP Code: 018871090
10. Telephone: 9786588888 11. Ext: 12. Email: catherine_malagrida@unifirst.com

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS: ☐ Check here to change relationship

- ☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter
☒ e. Other RP or PRP Specify: OTHER PRPS
- ☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- ☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
- ☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

- ☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.
- ☒ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.
- ☒ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.
- ☒ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.
- ☒ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.
- ☐ 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.
- ☐ 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.
- ☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to: BWSC.eDEP@Mass.Gov.
- ☒ 9. Check here to certify that the LSP Opinion containing the material facts, data including, but not limited to: pressure measurements, maps, graphs, or diagrams, and other information is attached.



COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

Release Tracking Number

3 - 23246

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, _____, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>if Section B indicates that this is a **Modification of a Remedy Operation Status (ROS)**, I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons performing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: _____ 3. Title: ENV COMPLIANCE MANAGER
Signature

4. For: UNIFIRST CORPORATION 5. Date: _____
(Name of person or entity recorded in Section D) (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: _____
8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____
11. Telephone: _____ 12. Ext: _____ 13. Email: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT

BWSC108 -A

Pursuant to 310 CMR 40.0800 (SUBPART H)

Release Tracking Number

Remedial System or Monitoring Program:

1

of:

5

3

- 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery

☐ ii. Soil Vapor Extraction/Bioventing

☐ iii. Vapor-phase Carbon Adsorption

☐ iv. Groundwater Recovery

☐ v. Dual/Multi-phase Extraction

☐ vi. Aqueous-phase Carbon Adsorption

☐ vii. Air Stripping

☐ viii. Sparging/Biosparging

☐ ix. Cat/Thermal Oxidation

☐ x. Other Describe: _____

☒ b. Active Exposure Pathway Elimination Measure

Active Exposure Pathway Mitigation System to address (check one): ☒ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)

☐ i. To the Subsurface

☐ ii. To Groundwater (Injection)

☐ iii. To the Surface (Including stockpiled soil)

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)

☐ i. Reactive Wall

☐ ii. Natural Attenuation

☐ iii. Other

Describe: _____

2. Mode of Operation: (check one)

☒ a. Continuous

☐ b. Intermittent

☐ c. Pulsed

☐ d. One-time Event Only

☐ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

☐ a. Sanitary Sewer (O1)

☐ b. Groundwater Re-infiltration Re-injection: (check one)

☐ i. Downgradient

☐ ii. Upgradient

☒ c. Vapor-phase Discharge to Ambient Air: (check one)

☒ i. Off-gas Controls

☐ ii. No Off-gas Controls

☐ d. Drinking Water Supply

☐ e. Surface Water (including Storm Drains)

☐ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal:

From: 6/1/2024

To: 12/15/2024

(mm/dd/yyyy)

(mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.

☐ ii. Other Describe: _____

☒ b. Post-system Startup (after first month) or Monitoring Program:

☐ i. Monthly

☐ ii. Quarterly

☐ iii. Annually

☒ iv. Other Describe: OPERATIONAL PARAMETERS QUARTERLY, OFF-GAS MONTHLY

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one)

☐ a. Remediation General Permit

☐ b. Individual Permit

☐ c. Emergency Exclusion

Effective Date of Permit: _____

(mm/dd/yyyy)

☒ 2. MCP Performance Standard

MCP Citations(s):

WSC-94-150

☐ 3. DEP Approval Letter

Date of Letter: _____

(mm/dd/yyyy)

☐ 4. Other Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: of

BWSC108 -A

Release Tracking Number

-

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____
(mm/dd/yyyy)
- ☐ 2. Not Required
- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM, ACTIVE EXPOSURE PATHWAY MITIGATION MEASURE(AEPM) OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

- ☒ 1. The Active Remedial System or AEPM was functional one or more days during the Reporting Period.
- a. Days System was Fully Functional: b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): f. Avg. Sparging Rate (scfm): _____
- ☐ 2. Remedial Additives: (check all that apply)

- ☐ a. No Remedial Additives applied during the Reporting Period.
- ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
- ☐ i. Nitrogen/Phosphorus: ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

- ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: 1 of 5

BWSC108 -A

Release Tracking Number

3 - 23246

E. STATUS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM:

(check all that apply)

☐ 1. The Active Remedial System or AEPMM had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: b. Total Number of Days of Unscheduled Shutdowns:

c. Reason(s) for Unscheduled Shutdowns:

☐ 2. The Active Remedial System or AEPMM had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: b. Total Number of Days of Scheduled Shutdowns:

c. Reason(s) for Scheduled Shutdowns:

☐ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: (mm/dd/yyyy)

☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe:

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☒ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☒ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☒ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
MEASUREMENTS

BWSC108 -B

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program:

1

of: 5

Release Tracking Number

3

23246

For each Point of Measurement, related to concentration indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.

For each Point of Measurement for pressure differentials, indicate the lowest pressure differential detected during the reporting period.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentration (where applicable)	Midpoint Concentration (where applicable)	(check one)	Check here, if ND/BDL	Permissible Concentration or Pressure Differential	Units	Within Permissible Limits? (Y/N)
					☒ Discharge ☐ GroundWater Concentration Pressure Differential				
SSDS	06/21/2024	TOTAL VOCS	1.8		0.0	☒	0.09	PPMV	YES
SSDS	07/10/2024	TOTAL VOCS	2.1		0.0	☒	0.105	PPMV	YES
SSDS	08/09/2024	TOTAL VOCS	2.1		0.0	☒	0.105	PPMV	YES
SSDS	09/19/2024	TOTAL VOCS	8.3		0.0	☒	0.415	PPMV	YES
SSDS	10/09/2024	TOTAL VOCS	3.2		0.0	☒	0.16	PPMV	YES
SSDS	11/07/2024	TOTAL VOCS	3.7		0.0	☒	0.185	PPMV	YES
SSDS	12/05/2024	TOTAL VOCS	2.0		0.0	☒	0.1	PPMV	YES

☐ Check here if any additional BWSC108-B Measurements Form(s), are needed.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT

BWSC108 -A

Pursuant to 310 CMR 40.0800 (SUBPART H)

Release Tracking Number

Remedial System or Monitoring Program: 2 of 5

3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☒ a. Active Remedial System: (check all that apply)

- ☐ i. NAPL Recovery ☒ ii. Soil Vapor Extraction/Bioventing ☐ iii. Vapor-phase Carbon Adsorption
☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption
☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation
☐ x. Other Describe: _____

☐ b. Active Exposure Pathway Elimination Measure

Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)

- ☐ i. To the Subsurface ☐ ii. To Groundwater (Injection) ☐ iii. To the Surface (Including stockpiled soil)

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)

- ☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe: _____

2. Mode of Operation: (check one)

- ☒ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

- ☐ a. Sanitary Sewer (O1)
☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
☒ c. Vapor-phase Discharge to Ambient Air: (check one) ☒ i. Off-gas Controls ☐ ii. No Off-gas Controls
☐ d. Drinking Water Supply
☐ e. Surface Water (including Storm Drains)
☐ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal:

From: 6/1/2024 To: 12/15/2024
(mm/dd/yyyy) (mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

- ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
☐ ii. Other Describe: _____

☒ b. Post-system Startup (after first month) or Monitoring Program:

- ☐ i. Monthly
☐ ii. Quarterly
☐ iii. Annually
☒ iv. Other Describe: OPERATIONAL PARAMETERS QUARTERLY, OFF-GAS MONTHLY

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

- ☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit
☐ c. Emergency Exclusion Effective Date of Permit: _____

(mm/dd/yyyy)

☒ 2. MCP Performance Standard MCP Citations(s): WSC-94-150

☐ 3. DEP Approval Letter Date of Letter: _____
(mm/dd/yyyy)

☐ 4. Other Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: 2 of 5

BWSC108 -A

Release Tracking Number

3 - 23246

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____
(mm/dd/yyyy)
- ☐ 2. Not Required
- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM, ACTIVE EXPOSURE PATHWAY MITIGATION MEASURE(AEPM) OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

- ☒ 1. The Active Remedial System or AEPM was functional one or more days during the Reporting Period.
- a. Days System was Fully Functional: 183 b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): 461 f. Avg. Sparging Rate (scfm): _____
- ☐ 2. Remedial Additives: (check all that apply)

- ☐ a. No Remedial Additives applied during the Reporting Period.
- ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
- ☐ i. Nitrogen/Phosphorus: ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

- ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: 2 of 5

BWSC108 -A

Release Tracking Number

3 - 23246

E. STATUS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM:

(check all that apply)

☐ 1. The Active Remedial System or AEPMM had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System or AEPMM had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☒ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☒ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☒ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
MEASUREMENTS

BWSC108 -B

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: of:

Release Tracking Number

For each Point of Measurement, related to concentration indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.

For each Point of Measurement for pressure differentials, indicate the lowest pressure differential detected during the reporting period.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentration (where applicable)	Midpoint Concentration (where applicable)	(check one)	Check here, if ND/BDL	Permissible Concentration or Pressure Differential	Units	Within Permissible Limits? (Y/N)
					☒ Discharge ☐ GroundWater Concentration Pressure Differential				
SSDS	06/21/2024	TOTAL VOCS	1.8		0.0	☒	0.09	PPMV	YES
SSDS	07/10/2024	TOTAL VOCS	2.1		0.0	☒	0.105	PPMV	YES
SSDS	08/09/2024	TOTAL VOCS	2.1		0.0	☒	0.105	PPMV	YES
SSDS	09/19/2024	TOTAL VOCS	8.3		0.0	☒	0.415	PPMV	YES
SSDS	10/09/2024	TOTAL VOCS	3.2		0.0	☒	0.16	PPMV	YES
SSDS	11/07/2024	TOTAL VOCS	3.7		0.0	☒	0.185	PPMV	YES
SSDS	12/05/2024	TOTAL VOCS	2.0		0.0	☒	0.1	PPMV	YES

☐ Check here if any additional BWSC108-B Measurements Form(s), are needed.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT

BWSC108 -A

Pursuant to 310 CMR 40.0800 (SUBPART H)

Release Tracking Number

Remedial System or Monitoring Program:

3

of:

5

3

- 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery

☐ ii. Soil Vapor Extraction/Bioventing

☐ iii. Vapor-phase Carbon Adsorption

☐ iv. Groundwater Recovery

☐ v. Dual/Multi-phase Extraction

☐ vi. Aqueous-phase Carbon Adsorption

☐ vii. Air Stripping

☐ viii. Sparging/Biosparging

☐ ix. Cat/Thermal Oxidation

☐ x. Other Describe: _____

☒ b. Active Exposure Pathway Elimination Measure

Active Exposure Pathway Mitigation System to address (check one): ☒ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)

☐ i. To the Subsurface

☐ ii. To Groundwater (Injection)

☐ iii. To the Surface (Including stockpiled soil)

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)

☐ i. Reactive Wall

☐ ii. Natural Attenuation

☐ iii. Other

Describe: _____

2. Mode of Operation: (check one)

☒ a. Continuous

☐ b. Intermittent

☐ c. Pulsed

☐ d. One-time Event Only

☐ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

☐ a. Sanitary Sewer (O1)

☐ b. Groundwater Re-injection (check one)

☐ i. Downgradient

☐ ii. Upgradient

☒ c. Vapor-phase Discharge to Ambient Air: (check one)

☐ i. Off-gas Controls

☒ ii. No Off-gas Controls

☐ d. Drinking Water Supply

☐ e. Surface Water (including Storm Drains)

☐ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal:

From: 6/1/2024

To: 12/15/2024

(mm/dd/yyyy)

(mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.

☐ ii. Other Describe: _____

☒ b. Post-system Startup (after first month) or Monitoring Program:

☐ i. Monthly

☒ ii. Quarterly

☐ iii. Annually

☐ iv. Other Describe: _____

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one)

☐ a. Remediation General Permit

☐ b. Individual Permit

☐ c. Emergency Exclusion

Effective Date of Permit: _____

(mm/dd/yyyy)

☒ 2. MCP Performance Standard

MCP Citations(s):

WSC-94-150

☐ 3. DEP Approval Letter

Date of Letter: _____

(mm/dd/yyyy)

☐ 4. Other Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: of

BWSC108 -A

Release Tracking Number

-

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: _____ b. Grade: _____

c. License No: _____ d. License Exp. Date: _____
(mm/dd/yyyy)

☐ 2. Not Required

☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM, ACTIVE EXPOSURE PATHWAY MITIGATION MEASURE(AEPM) OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☒ 1. The Active Remedial System or AEPM was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: b. GW Recovered (gals): _____

c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____

e. Avg. Soil Gas Recovery Rate (scfm): f. Avg. Sparging Rate (scfm): _____

☐ 2. Remedial Additives: (check all that apply)

☐ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: 3 of 5

BWSC108 -A

Release Tracking Number

3 - 23246

E. STATUS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM:

(check all that apply)

☐ 1. The Active Remedial System or AEPMM had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System or AEPMM had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☐ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☐ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☐ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
MEASUREMENTS

BWSC108 -B

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: of:

Release Tracking Number

For each Point of Measurement, related to concentration indicate the highest concentration detected during the reporting period, of each oil, hazardous material and/or remedial additive.

For each Point of Measurement for pressure differentials, indicate the lowest pressure differential detected during the reporting period.

Point of Measurement	Date (mm/dd/yyyy)	Contaminant, Measurement and/or Indicator Parameter	Influent Concentration (where applicable)	Midpoint Concentration (where applicable)	(check one)	Check here, if ND/BDL	Permissible Concentration or Pressure Differential	Units	Within Permissible Limits? (Y/N)
					☒ Discharge ☐ GroundWater Concentration ☐ Pressure Differential				
SSDS	07/11/2024	TOTAL VOCS	0.2		0.1	☐	8	PPMV	YES
SSDS	10/09/2024	TOTAL VOCS	0.1		0.0	☒	8	PPMV	YES

☐ Check here if any additional BWSC108 B, Measurements Form(s), are needed.

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Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108 -A

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Release Tracking Number

Remedial System or Monitoring Program: 4 of: 5

3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery

☐ ii. Soil Vapor Extraction/Bioventing

☐ iii. Vapor-phase Carbon Adsorption

☐ iv. Groundwater Recovery

☐ v. Dual/Multi-phase Extraction

☐ vi. Aqueous-phase Carbon Adsorption

☐ vii. Air Stripping

☐ viii. Sparging/Biosparging

☐ ix. Cat/Thermal Oxidation

☐ x. Other Describe: _____

☒ b. Active Exposure Pathway Elimination Measure

Active Exposure Pathway Mitigation System to address (check one): ☒ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)

☐ i. To the Subsurface

☐ ii. To Groundwater (Injection)

☐ iii. To the Surface (Including stockpiled soil)

☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)

☐ i. Reactive Wall

☐ ii. Natural Attenuation

☐ iii. Other

Describe: _____

2. Mode of Operation: (check one)

☒ a. Continuous

☐ b. Intermittent

☐ c. Pulsed

☐ d. One-time Event Only

☐ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

☐ a. Sanitary Sewer (O1)

☐ b. Groundwater Re-infiltration Re-injection: (check one)

☐ i. Downgradient

☐ ii. Upgradient

☒ c. Vapor-phase Discharge to Ambient Air: (check one)

☐ i. Off-gas Controls

☒ ii. No Off-gas Controls

☐ d. Drinking Water Supply

☐ e. Surface Water (including Storm Drains)

☐ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal:

From: 6/1/2024

To: 12/15/2024

(mm/dd/yyyy)

(mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.

☐ ii. Other Describe: _____

☒ b. Post-system Startup (after first month) or Monitoring Program:

☐ i. Monthly

☐ ii. Quarterly

☐ iii. Annually

☒ iv. Other Describe: 60 TUFTS ST QUARTERLY, OTHER PROPERTIES ANNUALLY

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one)

☐ a. Remediation General Permit

☐ b. Individual Permit

☐ c. Emergency Exclusion

Effective Date of Permit: _____

(mm/dd/yyyy)

☒ 2. MCP Performance Standard

MCP Citations(s):

WSC-94-150

☐ 3. DEP Approval Letter

Date of Letter: _____

(mm/dd/yyyy)

☐ 4. Other Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: 4 of 5

BWSC108 -A

Release Tracking Number

3 - 23246

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____
(mm/dd/yyyy)
- ☐ 2. Not Required
- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM, ACTIVE EXPOSURE PATHWAY MITIGATION MEASURE(AEPM) OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

- ☒ 1. The Active Remedial System or AEPM was functional one or more days during the Reporting Period.
- a. Days System was Fully Functional: 183 b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): 130 f. Avg. Sparging Rate (scfm): _____
- ☐ 2. Remedial Additives: (check all that apply)

- ☐ a. No Remedial Additives applied during the Reporting Period.
- ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
- ☐ i. Nitrogen/Phosphorus: ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

- ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: 4 of 5

BWSC108 -A

Release Tracking Number

3 - 23246

E. STATUS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM:

(check all that apply)

☐ 1. The Active Remedial System or AEPMM had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System or AEPMM had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☐ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☐ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☐ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT

BWSC108 -A

Pursuant to 310 CMR 40.0800 (SUBPART H)

Release Tracking Number

Remedial System or Monitoring Program: 5 of: 5

3 - 23246

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)

☐ a. Active Remedial System: (check all that apply)

☐ i. NAPL Recovery

☐ ii. Soil Vapor Extraction/Bioventing

☐ iii. Vapor-phase Carbon Adsorption

☐ iv. Groundwater Recovery

☐ v. Dual/Multi-phase Extraction

☐ vi. Aqueous-phase Carbon Adsorption

☐ vii. Air Stripping

☐ viii. Sparging/Biosparging

☐ ix. Cat/Thermal Oxidation

☐ x. Other Describe: _____

☐ b. Active Exposure Pathway Elimination Measure

Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water

☐ c. Application of Remedial Additives: (check all that apply)

☐ i. To the Subsurface

☐ ii. To Groundwater (Injection)

☐ iii. To the Surface (Including stockpiled soil)

☒ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)

☐ i. Reactive Wall

☒ ii. Natural Attenuation

☐ iii. Other

Describe: _____

2. Mode of Operation: (check one)

☐ a. Continuous

☐ b. Intermittent

☐ c. Pulsed

☐ d. One-time Event Only

☐ e. Other: _____

3. System Effluent/Discharge: (check all that apply)

☐ a. Sanitary Sewer (01)

☐ b. Groundwater Re-infiltration/Re-injection: (check one)

☐ i. Downgradient

☐ ii. Upgradient

☐ c. Vapor-phase Discharge to Ambient Air: (check one)

☐ i. Off-gas Controls

☐ ii. No Off-gas Controls

☐ d. Drinking Water Supply

☐ e. Surface Water (including Storm Drains)

☐ f. Other Describe: _____

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal:

From: 6/1/2024

To: 12/15/2024

(mm/dd/yyyy)

(mm/dd/yyyy)

2. Number of monitoring events during the reporting period: (check one)

☐ a. System Startup: (if applicable)

☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.

☐ ii. Other Describe: _____

☒ b. Post-system Startup (after first month) or Monitoring Program:

☐ i. Monthly

☐ ii. Quarterly

☒ iii. Annually

☐ iv. Other Describe: _____

☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

☐ 1. NPDES: (check one)

☐ a. Remediation General Permit

☐ b. Individual Permit

☐ c. Emergency Exclusion

Effective Date of Permit: _____

(mm/dd/yyyy)

☐ 2. MCP Performance Standard MCP Citations(s): _____

☐ 3. DEP Approval Letter Date of Letter: _____

(mm/dd/yyyy)

☐ 4. Other Describe: _____



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: of

BWSC108 -A

Release Tracking Number

-

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

- ☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
a. Name: _____ b. Grade: _____
c. License No: _____ d. License Exp. Date: _____
(mm/dd/yyyy)
- ☐ 2. Not Required
- ☒ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM, ACTIVE EXPOSURE PATHWAY MITIGATION MEASURE(AEPMM) OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

- ☐ 1. The Active Remedial System or AEPMM was functional one or more days during the Reporting Period.
- a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____
c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____
e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm): _____
- ☐ 2. Remedial Additives: (check all that apply)

- ☐ a. No Remedial Additives applied during the Reporting Period.
- ☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)
- ☐ i. Nitrogen/Phosphorus: ☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

- ☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

☐ iv. Other:

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program: 5 of 5

BWSC108 -A

Release Tracking Number

3 - 23246

E. STATUS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM, AEPMM OR ACTIVE REMEDIAL MONITORING PROGRAM:

(check all that apply)

☐ 1. The Active Remedial System or AEPMM had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☐ 2. The Active Remedial System or AEPMM had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: _____ b. Total Number of Days of Scheduled Shutdowns: _____

c. Reason(s) for Scheduled Shutdowns: _____

☐ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____
(mm/dd/yyyy)

☐ b. No Further Effluent Discharge

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☒ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☒ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☒ 3. The Active Remedial System, AEPMM or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☒ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Additional supporting information for:

**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

BWSC-108, Section B, Question 15 and 18: Submit a **Phase V Status Report and Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).

The Phase V Status Report and Status Report to maintain ROS has been submitted via eDEP, Transmittal No. 1754278, as "Phase V Status Report No. 27 and Remedial Monitoring Report No. 42," RTN 3-23246, 50 Tufts Street, Somerville, Massachusetts, dated February 11, 2025.

Additional supporting information for:

CRA REMEDIAL MONITORING REPORT

Pursuant to 310 CMR 40.0800 (Subpart H)

BWSC-108A, Remedial System 5 of 5, Section G, Question 5: **SUMMARY STATEMENTS:**

Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

The Summary Statement for BWSC-108A Remedial System 5 of 5 has been submitted via eDEP, Transmittal No. 1754278 as part of the "Phase V Status Report No. 27 and Remedial Monitoring Report No. 42," RTN 3-23246, 50 Tufts Street, Somerville, Massachusetts, dated February 11, 2025.

Appendix B Property Owner Notification Letters

Table B-1. Correspondence Tracking
Phase V Status Report No. 26 and Remedial Monitoring Report No. 41
Residential and Commercial Properties
Somerville, Massachusetts

Property	Date	Communication
84 Franklin Street	July, September, and November 2024	Attempted to contact property owner via email, phone, and text message. Property owner has not responded since initial visit in 2023.
91-93 Franklin Street	November 2024	Called to schedule EPMM inspection, conducted on November 4, 2024.
95 Franklin Street	November 2024	Called to schedule EPMM inspection, conducted on November 4, 2024.
95R Franklin Street	September and November 2024	Called property management company in attempt to gain access for EPMM inspection. Unable to coordinate and will continue access correspondence.
97 Franklin Street	October 2024	GEI sent sample results letter from sampling conducted earlier in the year.
166-168 Glen Street	November 2024	Called to schedule EPMM inspection, conducted on November 6, 2024.
9 Knowlton Street	September 25, 2024	Email received from resident regarding property condition and stated that the local City of Somerville Councilor was copied. GEI followed up stating additional investigation was required within Knowlton Street and permits were pending.
	September 27, 2024	City Councilor Matt McLaughlin responded to email stating interest in the data. GEI provided a response on October 9, 2024
	November 2024	Emailled to schedule EPMM inspection, conducted on November 11, 2024
13 Knowlton Street	November 2024	Called to schedule EPMM inspection, conducted on November 13, 2024
17 Knowlton Street	November 2024	Emailled to schedule EPMM inspection, conducted on November 13, 2024
32 Knowlton Street	November 2024	Called to schedule EPMM inspection, conducted on November 4, 2024
34 Knowlton Street	November 2024	Called to schedule EPMM inspection, conducted on November 4, 2024
32 Knowlton Street	November 2024	Called to schedule EPMM inspection, conducted on November 6, 2024
31-33 Knowlton Street	November 2024	Emailled to schedule EPMM inspection, conducted on November 6, 2024
35-37 Knowlton Street	November 2024	Called to schedule EPMM inspection, conducted on November 8, 2024
4 Morton Street	November 2025	No response from owner or tenants. Will continue attempts to make contact for access request.
10 Morton Street	Monthly 2024	Called and visited property, at a minimum of monthly while home redevelopment and EPMM construction underway.
11 Morton Street	November 2024	Emailled to schedule EPMM inspection, conducted on November 8, 2024
12 Morton Street	November 2024	Emailled to schedule EPMM inspection, conducted on November 6, 2024
13 Morton Street	November 2024	Emailled to schedule EPMM inspection, conducted on November 13, 2024
18 Morton Street	October 7, 2024	New owner called about receiving GEI's Environmental Conditions Letter and "fan". GEI returned phone call and agreed to conduct a site visit.
	November 2024	Called to schedule EPMM inspection, conducted on November 6, 2024
19-19A Morton Street	November 2024	Called to schedule EPMM inspection, conducted on November 8, 2024
23 Tufts Street	November 2024	Called to schedule EPMM inspection, conducted on November 8, 2024
27 Tufts Street	November and December 2024	Called many times throughout November and December 2024 to conduct EPMM, no responses.
31 Tufts Street	August 2024	Emailled to schedule September 2024 indoor air and soil vapor sampling, provided Notice of Sampling and Results letters.
	November 2024	Emailled to schedule EPMM inspection, conducted on November 8, 2024
103 Washington Street	November 17, 2024	Email received from property owner requesting to be contacted. GEI responded via phone and set up a meeting for November 19, 2024.
	Ongoing	Emailled to schedule indoor air and soil vapor sampling in December 2024, provided Notice of Sampling letter.
105-107 Washington Street	December 2024	Emailled to schedule December 2024 indoor air and soil vapor sampling, provided Notice of Sampling letter.
121 Washington Street	Monthly 2024	Called and visited property, at a minimum of monthly while building redevelopment and EPMM construction underway.
City of Somerville	August 28, 2024	Emailled City of Somerville regarding public right of way borings in Knowlton Street and at the Capuano School.
	October 15, 2024	Meeting with the City of Somerville and Atlas regarding the Tufts Street improvement work.
	October 21, 2024	Emailled City of Somerville regarding Capuano School boring.
	October 24, 2024	Meeting with City of Somerville Schools and Department of Public Works regarding Capuano School boring. GEI agreed to install boring during the winter vacation week for the school.
	November 2024	Provided Notice of Sampling for GEI's November groundwater sampling.

General Notes:

1. EPMM = Exposure Pathway Mitigation Measure.

Consulting August 29, 2024
Engineers and Project 04516-3
Scientists

Ms. Eliza Datta
31 Tufts Street/Glen Pocket Park LLC
40 Homer Street
Newton, MA 02459

Ms. Eliza Datta:

**Re: Indoor Air and Soil Vapor Sampling
31 Tufts Street
Somerville, Massachusetts**

Thank you for permitting GEI to conduct indoor air and soil vapor sampling at your property located at 31 Tufts Street in Somerville, Massachusetts. Prior to sampling, we are providing you with a "Notice of Environmental Sampling Form (BWSC-123)," as required by the Massachusetts Department of Environmental Protection (MassDEP). We will also provide you with the results of the indoor air and soil vapor sampling after they are available from the analytical laboratory.

Thank you for your continued assistance. Please contact me at 781-721-4012 or igladstone@geiconsultants.com, if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.



Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President



Christopher Coner, CHMM
Project Manager

MEF/COC:jam
Enclosure

c: Catherine Malagrida, UniFirst Corporation
MassDEP-NERO (as part of Status Report)

B:\Private\04516\2.0 Correspondence\2.4 Residences\Individual Residences\Tufts Street\31 Tufts Street\Sept 2024 Indoor Air Sampling\NOS\31 Tufts Street NOS Aug 2024.docx



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

3 - 23246

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Tufts Street
City/Town: Somerville Zip Code: 02145-4129

B. This notice is being provided to the following party:

1. Name: Eliza Datta - 31 Tufts St/Tufts Glen Pocket Park LLC
2. Street Address: 40 Homer Street
City/Town: Newton, MA Zip Code: 02459

C. This notice is being given to inform its recipient (the party listed in Section B):

- ☒ 1. That environmental sampling will be/~~has been~~ conducted at property owned by the recipient of this notice.
☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling will be/~~has been~~ conducted:

1. Street Address: 31 Tufts Street
City/Town: Somerville, MA Zip Code: 02145-4400
2. MCP phase of work during which the sampling will be/~~has been~~ conducted:
- | | |
|---|--|
| ☐ Immediate Response Action | ☐ Phase III Feasibility Evaluation |
| ☐ Release Abatement Measure | ☐ Phase IV Remedy Implementation Plan |
| ☐ Utility-related Abatement Measure | ☒ Phase V/Remedy Operation Status |
| ☐ Phase I Initial Site Investigation | ☐ Post-Temporary Solution Operation, Maintenance and Monitoring |
| ☐ Phase II Comprehensive Site Assessment | ☐ Other _____ |
- (specify)
3. Description of property where sampling will be/~~has been~~ conducted:
☒ residential ☐ commercial ☐ industrial ☐ school/playground ☐ Other _____
(specify)
4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice.
Indoor Air and Sub-slab soil vapor sampling

E. Contact information related to the party providing this notice:

Contact Name: Ileen Gladstone, P.E., LSP, LEED AP
Street Address: GEI Consultants, Inc., 400 Unicorn Park Drive
City/Town: Woburn, MA Zip Code: 01801-3341
Telephone: (781) 721-4012 Email: igladstone@geiconsultants.com



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3 - 23246

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

January 10, 2025

Project 045163

VIA EMAIL: edatta@e3devco.com

Eliza Datta
31 Tufts Street/Glen Pocket Park LLC
40 Homer Street
Newton, MA 02459

**Re: Indoor Air and Soil Vapor Sampling Results
31 Tufts Street
Somerville, Massachusetts**

Dear Ms. Datta:

On behalf of the UniFirst Corporation, GEI Consultants, Inc. collected indoor air and soil vapor samples on September 6, 2024, at your property at 31 Tufts Street to evaluate the potential for vapor intrusion. We are providing you with the sampling results and a "Notice of Environmental Sampling" (Form BWSC-123) as required by the Massachusetts Department of Environmental Protection (MassDEP).

On September 6, 2024, five indoor air samples were collected on the first floor in each of the four units and the utility room. The samples were collected over a 24-hour period with the vent pipe open. Attached is a summary table of the chemicals detected in the indoor air samples along with the previous sampling results (Table 1), and the laboratory data sheets for the recent sampling.

Tetrachloroethylene (PCE) was detected in IA-1 (Unit 1) at a concentration of 0.604 micrograms per meter cubed ($\mu\text{g}/\text{m}^3$), IA-3 (utility room) a concentration of $0.210 \mu\text{g}/\text{m}^3$, and IA-5 (Unit 3) at a concentration of $0.142 \mu\text{g}/\text{m}^3$. Trans-1,2-dichloroethylene (trans-1,2-DCE) was detected in all five samples at concentrations between $0.119 \mu\text{g}/\text{m}^3$ and $0.167 \mu\text{g}/\text{m}^3$. 1,1-dichloroethane (1,1-DCA) was detected in IA-1 at a concentration of $0.134 \mu\text{g}/\text{m}^3$.

On September 6, 2024, two soil vapor samples were collected from beneath the building slab in the utility room (SV1) and in the northern stairwell (SV2). The samples were collected over 1 hour. Attached is a summary table of the chemicals detected in the soil vapor samples along with the previous sampling results (Table 2), and the laboratory data sheets for the recent sampling. PCE was detected at concentrations of $94.9 \mu\text{g}/\text{m}^3$ and $61.4 \mu\text{g}/\text{m}^3$, at SV1 and SV2, respectively. The following chlorinated VOCs were detected in SV1: 1,1-DCA ($0.366 \mu\text{g}/\text{m}^3$), 1,1-dichloroethylene ($0.174 \mu\text{g}/\text{m}^3$), trans-1,2-DCE ($0.083 \mu\text{g}/\text{m}^3$), 1,1,1-trichloroethane ($7.47 \mu\text{g}/\text{m}^3$), and trichloroethylene ($2.09 \mu\text{g}/\text{m}^3$). The following chlorinated VOCs were detected in SV2: 1,1-DCA ($0.546 \mu\text{g}/\text{m}^3$), cis-1,2-DCE ($0.083 \mu\text{g}/\text{m}^3$), 1,1,1-trichloroethane ($14.60 \mu\text{g}/\text{m}^3$), and trichloroethylene ($4.58 \mu\text{g}/\text{m}^3$).

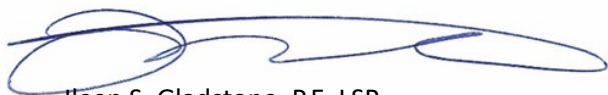
The October 2023, January 2024, and September 2024 indoor air sampling results indicate that a condition of NSR exists, but additional evaluation is required. We would like to collect additional rounds of indoor air data to continue to evaluate if the EPMM is required to maintain a level of NSR. The next round of indoor air sampling will be conducted in winter 2025 with the vent pipe closed.

Individuals and public officials may request additional public involvement activities under the Massachusetts Contingency Plan (MCP; 310 CMR 40.1403(9) and 40.1404). The property owner also may request additional documentation, such as that listed at 310 CMR 40.0017(3), associated with the above-referenced samples. We will provide such additional documentation within 30 days of our receipt of such a request.

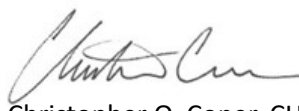
We appreciate your continued cooperation throughout the sampling process. If you have any questions regarding the sampling results, please do not hesitate to contact me at 781.721.4012 or igladstone@geiconsultants.com.

Sincerely,

GEI Consultants, Inc



Ileen S. Gladstone, P.E, LSP
Senior Vice President



Christopher O. Coner, CHMM
Project Manager

MEF/ISG:jam

B:\Private\04516\2.0 Correspondence\2.4 Residences\Individual Residences\Tufts Street\31 Tufts Street\Sept 2024 Indoor Air Sampling\Results\31Tufts Sept2024 Results Letter.docx

cc: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

3 - 23246

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Tufts Street
City/Town: Somerville Zip Code: 02145-4129

B. This notice is being provided to the following party:

1. Name: Eliza Datta - 31 Tufts St/Tufts Glen Pocket Park LLC
2. Street Address: 40 Homer Street
City/Town: Newton, MA Zip Code: 02459

C. This notice is being given to inform its recipient (the party listed in Section B):

- ☒ 1. That environmental sampling ~~will be~~/has been conducted at property owned by the recipient of this notice.
- ☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
- ☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling ~~will be~~/has been conducted:

1. Street Address: 31 Tufts Street
City/Town: Somerville, MA Zip Code: 02145-4400
2. MCP phase of work during which the sampling ~~will be~~/has been conducted:
- | | |
|---|--|
| ☐ Immediate Response Action | ☐ Phase III Feasibility Evaluation |
| ☐ Release Abatement Measure | ☐ Phase IV Remedy Implementation Plan |
| ☐ Utility-related Abatement Measure | ☒ Phase V/Remedy Operation Status |
| ☐ Phase I Initial Site Investigation | ☐ Post-Temporary Solution Operation, Maintenance and Monitoring |
| ☐ Phase II Comprehensive Site Assessment | ☐ Other _____ |
- (specify)
3. Description of property where sampling ~~will be~~/has been conducted:
- ☒ residential ☐ commercial ☐ industrial ☐ school/playground ☐ Other _____
- (specify)
4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice.
- Indoor Air and Sub-slab soil vapor sampling

E. Contact information related to the party providing this notice:

Contact Name: Ileen Gladstone, P.E., LSP, LEED AP
Street Address: GEI Consultants, Inc., 400 Unicorn Park Drive
City/Town: Woburn, MA Zip Code: 01801-3341
Telephone: (781) 721-4012 Email: igladstone@geiconsultants.com



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3 - 23246

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Table 1. Chemical Testing Results - Indoor Air
31 Tufts Street
Somerville, Massachusetts

Sample Location: Sample Name: Sample Date: Collected By:				31 Tufts Street										
				31TUFT-IA1			31TUFT-IA2			31TUFT-IA3			31TUFT-IA4	31TUFT-IA5
				10/17/2023	1/31/2024	9/6/2024	10/17/2023	1/31/2024	9/6/2024	10/17/2023	1/31/2024	9/6/2024	9/6/2024	9/6/2024
				GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI	GEI
Analyte	Method	Units	Residential Indoor Air Threshold Values											
Volatile Organic Compounds (VOCs)	TO-15	µg/m³												
1,1-Dichloroethane			0.8	<0.081	<0.081	0.134	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081	<0.081
1,1-Dichloroethene			0.8	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079
cis-1,2-Dichloroethene			0.8	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079
trans-1,2-Dichloroethene			0.8	<0.079	0.103	0.139	<0.079	<0.079	0.139	<0.079	<0.079	0.147	0.119	0.167
Tetrachloroethene			1.4	<0.136	<0.136	0.604	0.203	<0.136	<0.136	0.176	<0.136	0.210	<0.136	0.142
1,1,2,2 Tetrachloroethane			0.06	<0.137	<0.137	<0.137	<0.137	<0.137	<0.137	<0.137	<0.137	<0.137	<0.137	<0.137
1,1,2 Trichloroethane			0.06	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109
1,1,1-Trichloroethane			3	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109	<0.109
Trichloroethene			0.4	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107	<0.107
Vinyl chloride			0.27	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051	<0.051

General Notes

1. Analytes detected above the laboratory reporting limit are reported here. For a complete list of analytes see the laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. Residential Threshold Values are cited from "Vapor Intrusion Guidance WSC#16-435" from the Massachusetts Department of Environmental Protection dated October 2016.

Table 2. Chemical Testing Results - Sub Slab Soil Vapor
31 Tufts Street
Somerville, Massachusetts

				31 Tufts Street					
				31TUFT-SV1			31TUFT-SV2		
				10/17/2023	1/31/2024	9/6/2024	10/27/2023	1/31/2024	9/6/2024
				GEI	GEI	GEI	GEI	GEI	GEI
	Method	Units	Residential Sub-Slab Screening Values						
Volatile Organic Compounds (VOCs)	TO-15 SIM	µg/m ³							
1,1-Dichloroethane			56	<0.162	<0.081	0.356	<0.081	<0.081	0.546
1,1-Dichloroethene			56	<0.159	<0.079	0.174	<0.079	<0.079	<0.079
cis-1,2-Dichloroethene			56	<0.159	<0.079	<0.079	<0.079	0.270	0.083
trans-1,2-Dichloroethene			56	<0.159	<0.079	0.083	0.119	<0.079	<0.079
Tetrachloroethene			98	58.7	31.5	94.9	59.1	77.3	61.4
1,1,2,2-Tetrachloroethane			2.8	<0.275	<0.137	<0.137	1.4	<0.137	<0.137
1,1,1-Trichloroethane			210	2.87	0.786	7.47	8.95	9.82	14.60
Trichloroethene			28	1.38	<0.107	2.09	2.41	2.42	4.58

General Notes

1. Analytes detected above the laboratory reporting limit are reported here. For a complete list of analytes see the laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. Residential Screening Values are cited from "Vapor Intrusion Guidance WSC#16-435" from the Massachusetts Department of Environmental Protection dated October 2016.

Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-01
 Client ID: 045163-31TUFT-IA1
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 11:04
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 20:02
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.035	0.020	--	0.139	0.079	--		1
1,1-Dichloroethane	0.033	0.020	--	0.134	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.089	0.020	--	0.604	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	97		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-02
 Client ID: 045163-31TUFT-IA2
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 10:45
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 20:42
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.035	0.020	--	0.139	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	98		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-03
 Client ID: 045163-31TUFT-IA3
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 10:59
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 21:23
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.037	0.020	--	0.147	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.031	0.020	--	0.210	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	98		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-04
 Client ID: 045163-31TUFT-IA4
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 10:53
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 22:03
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.030	0.020	--	0.119	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	95		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-05
 Client ID: 045163-31TUFT-IA5
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 10:48
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 23:23
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.042	0.020	--	0.167	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.021	0.020	--	0.142	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	101		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-06
 Client ID: 045163-31TUFT-SV1
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 12:43
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/12/24 00:04
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	0.044	0.020	--	0.174	0.079	--		1
trans-1,2-Dichloroethene	0.021	0.020	--	0.083	0.079	--		1
1,1-Dichloroethane	0.088	0.020	--	0.356	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	1.37	0.020	--	7.47	0.109	--		1
Trichloroethene	0.388	0.020	--	2.09	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	14.0	0.020	--	94.9	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	90		60-140
bromochloromethane	106		60-140
chlorobenzene-d5	101		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-07

Client ID: 045163-31TUFT-SV2

Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 12:40

Date Received: 09/06/24

Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor

Analytical Method: 101,TO-15-SIM

Analytical Date: 09/12/24 00:44

Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	0.135	0.020	--	0.546	0.081	--		1
cis-1,2-Dichloroethene	0.021	0.020	--	0.083	0.079	--		1
1,1,1-Trichloroethane	2.68	0.020	--	14.6	0.109	--		1
Trichloroethene	0.852	0.020	--	4.58	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	9.06	0.020	--	61.4	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	92		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	100		60-140





Consulting
Engineers and
Scientists

October 9, 2024
Project 045163

Catalina Barahona
97 Franklin Street
Somerville, MA 02145

Dear Ms. Barahona

**Re: Indoor Air and Sub-Slab Soil Vapor Sampling Results
97 Franklin Street
Somerville, Massachusetts**

On behalf of the UniFirst Corporation, GEI Consultants, Inc. collected indoor air and sub-slab soil vapor samples on May 24, 2024, at your property at 97 Franklin Street to evaluate the potential for vapor intrusion.

On May 24, 2024, one indoor air sample was collected on the first floor, one indoor air sample was collected on the second floor, and one indoor air sample was collected in the basement. The samples were collected over a 24-hour period. Attached is a summary table of the chemicals detected in the indoor air samples (Table 1), and the laboratory data sheets for the recent sampling.

Tetrachloroethylene (PCE) was detected in the basement sample at a concentration of 1.72 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and in the first-floor sample at a concentration of 0.522 $\mu\text{g}/\text{m}^3$. PCE was not detected in the sample collected from the second floor. Additionally, TCE was detected in the basement at a concentration of 0.489 $\mu\text{g}/\text{m}^3$, in the first-floor sample at a concentration of 0.167 $\mu\text{g}/\text{m}^3$, and in the second floor sample at a concentration 0.150 $\mu\text{g}/\text{m}^3$. 1,1,1-Trichloroethane (TCA) was detected in the basement sample at concentration of 0.125 $\mu\text{g}/\text{m}^3$.

On May 24, 2024, GEI collected two soil vapor samples from the previously installed sub-slab monitoring points to evaluate the concentrations of chlorinated VOCs in soil vapor beneath the building. Attached is a summary table of the chemicals detected in the soil vapor samples (Table 2) and the laboratory data sheets for the recent sampling.

Concentrations of PCE were detected above laboratory reporting limits. PCE was detected in both samples at 1.31 $\mu\text{g}/\text{m}^3$ and 6.16 $\mu\text{g}/\text{m}^3$ in SS1 and SS2, respectively. TCE was detected in SS2 at a concentration of 0.150 $\mu\text{g}/\text{m}^3$. TCA was detected in SS2 at a concentration of 0.136 $\mu\text{g}/\text{m}^3$.

The concentrations of PCE and TCE detected on the first and second floors are below the Massachusetts Department of Environmental Protection (MassDEP) threshold values (TV), which indicate that the vapor intrusion pathway is unlikely to be of concern. Although the concentrations of PCE and TCE exceeded the TVs in the basement, a risk, performed by GEI using the May 24, 2024, indoor air results in accordance with MassDEP protocols demonstrates that the indoor air concentrations pose No Significant Risk (NSR) to a residential occupant.

GEI recommends installing new soil vapor sampling ports and collecting an additional sample during the fall of 2024 to continue to evaluate the potential for a vapor intrusion pathway.

Individuals and public officials may request additional public involvement activities under the Massachusetts Contingency Plan (MCP; 310 CMR 40.1403(9) and 40.1404). The property owner may also request additional documentation, such as that listed at 310 CMR 40.0017(3), associated with the above-referenced samples. We will provide such additional documentation within 30 days of our receipt of such a request.

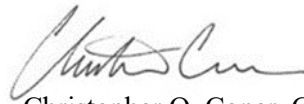
We appreciate your continued cooperation throughout the sampling process. If you have any questions regarding the sampling results, please do not hesitate to contact me at 781-721-4012 or igladstone@geiconsultants.com.

Sincerely,

GEI CONSULTANTS, INC.



Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President



Christopher O. Coner, CHMM
Project Manager

MEF/COC:jam

Enclosures

c: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report

Table 1 -Chemical Testing Results - Indoor Air
97 Franklin Street
Somerville, Massachusetts

Sample Location: Sample Name: Sample Date:		97 Franklin Street																											
		97FRAN-1 9/29/07		97FRAN-B 9/29/07		97FRAN-1 2/21/08		97FRAN-B 2/21/08		97FRAN-1 7/24/08		97FRAN-B 7/24/08		97FRAN-1 1/14/09		97FRAN-B 1/14/09		97FRAN-1 3/8/10		97FRAN-B 3/8/10		97FRAN-1 5/24/24		97FRAN-B 5/24/24		97FRAN-2 5/24/24			
		µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv		
Analyte	Method																												
Volatile Organic Compounds (VOCs)		TO-15																											
Carbon Tetrachloride		< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	0.69 J	0.11 J	0.69 J	0.11 J	0.63 J	0.10 J	0.75 J	0.12 J	< 1.3	< 0.20	< 1.3	< 0.20	< 1.3	< 0.20	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane		< 0.81	< 0.20	< 0.81	< 0.20	0.69 J	0.17 J	< 0.81	< 0.20	11	2.6	0.81	0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	< 0.81	< 0.20	NT	NT	NT	NT	NT	NT
Tetrachloroethylene (PCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.0 J	0.15 J	< 1.4	< 0.20	1.3 J	0.19 J	< 1.4	< 0.20	0.81 J	0.12 J	1.0 J	0.15 J	1.6	0.23	0.522	0.077	1.72	0.254	<0.136	<0.020	<0.136	<0.020
1,1,1-Trichloroethane		<1.1	< 0.20	<1.1	< 0.20	<1.1	< 0.20	<1.1	< 0.20	<1.1	< 0.20	<1.1	< 0.20	<1.1	< 0.20	<1.1	< 0.20	<1.1	< 0.20	<1.1	< 0.20	<1.1	< 0.20	<0.109	<0.020	0.125	0.023	<0.109	<0.020
Trichloroethylene (TCE)		< 1.4	< 0.20	< 1.4	< 0.20	< 1.4	< 0.20	1.0 J	0.15 J	< 1.4	< 0.20	1.3 J	0.19 J	< 1.4	< 0.20	0.81 J	0.12 J	1.0 J	0.15 J	1.6	0.23	0.167	0.031	0.489	0.091	0.150	<0.028	0.150	<0.028

- General Notes:**
1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
 2. µg/m³ = micrograms per cubic meter.
 3. ppbv = parts per billion by volume.
 4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Qualifying Note:
J The reported result is below the laboratory reporting limit and is estimated.

Table 2 - Chemical Testing Results - Sub-Slab Soil Vapor
97 Franklin Street
Somerville, Massachusetts

		97 Franklin Street							
		97FRANK-SS1		97FRANK-SS2		97FRANK-SS1		97FRANK-SS2	
		6/30/2007		6/30/2007		5/24/2024		5/24/2024	
		µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv
Analyte	Method								
Volatile Organic Compounds (VOCs)	TO-15								
Carbon tetrachloride		0.82 J	0.13 J	< 0.53	< 0.20	NT	NT	NT	NT
Tetrachloroethylene (PCE)		34	5.0	86.8	12.8	1.31	0.193	6.16	0.909
1,1,1-Trichloroethane (TCA)		< 1.1	< 0.20	1.5	0.27	<0.109	<0.020	0.136	0.025
Trichloroethylene (TCE)		<1.1	<0.20	<1.1	<0.20	<0.107	<0.020	0.150	0.028

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.

Project Name: TUFTS ST.**Project Number:** 045163**Lab Number:** L2429387**Report Date:** 06/11/24**SAMPLE RESULTS**

Lab ID: L2429387-01
 Client ID: 045163-97FRAN-B
 Sample Location: SOMERVILLE, MA

Date Collected: 05/24/24 10:36
 Date Received: 05/28/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 06/09/24 18:24
 Analyst: JMB

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	0.023	0.020	--	0.125	0.109	--		1
Trichloroethene	0.091	0.020	--	0.489	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.254	0.020	--	1.72	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	98		60-140



Project Name: TUFTS ST.**Lab Number:** L2429387**Project Number:** 045163**Report Date:** 06/11/24**SAMPLE RESULTS**

Lab ID: L2429387-02
 Client ID: 045163-97FRAN-1
 Sample Location: SOMERVILLE, MA

Date Collected: 05/24/24 10:42
 Date Received: 05/28/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 06/09/24 19:01
 Analyst: JMB

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.031	0.020	--	0.167	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.077	0.020	--	0.522	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	98		60-140



Project Name: TUFTS ST.**Project Number:** 045163**Lab Number:** L2429387**Report Date:** 06/11/24**SAMPLE RESULTS**

Lab ID: L2429387-03
 Client ID: 045163-97FRAN-2
 Sample Location: SOMERVILLE, MA

Date Collected: 05/24/24 10:49
 Date Received: 05/28/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 06/09/24 19:38
 Analyst: JMB

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.028	0.020	--	0.150	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	95		60-140



Project Name: TUFTS ST.**Lab Number:** L2429387**Project Number:** 045163**Report Date:** 06/11/24**SAMPLE RESULTS**

Lab ID: L2429387-04
 Client ID: 045163-97FRAN-SS1
 Sample Location: SOMERVILLE, MA

Date Collected: 05/24/24 13:47
 Date Received: 05/28/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 06/10/24 21:29
 Analyst: BJB

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.193	0.020	--	1.31	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	91		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	102		60-140



Project Name: TUFTS ST.**Lab Number:** L2429387**Project Number:** 045163**Report Date:** 06/11/24**SAMPLE RESULTS**

Lab ID: L2429387-05
 Client ID: 045163-97FRAN-SS2
 Sample Location: SOMERVILLE, MA

Date Collected: 05/24/24 13:46
 Date Received: 05/28/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 06/10/24 22:06
 Analyst: BJB

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	0.025	0.020	--	0.136	0.109	--		1
Trichloroethene	0.028	0.020	--	0.150	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.909	0.020	--	6.16	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	91		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	102		60-140





Consulting
Engineers and
Scientists

December 6, 2024
Project 04516-3

Ms. Vera Rodrigues
Hodan Property Management
105 Washington Street
Somerville, MA 02143

Ms. Vera Rodrigues:

**Re: Indoor Air and Soil Vapor Sampling
103 Washington Street
Somerville, Massachusetts**

Thank you for permitting GEI to conduct soil vapor and indoor air sampling at your property located at 103 Washington Street in Somerville, Massachusetts. Following sampling, we are providing you with a "Notice of Environmental Sampling Form (BWSC-123)," as required by the Massachusetts Department of Environmental Protection (MassDEP). We will also provide you with the results of the soil vapor sampling after they are available from the analytical laboratory.

Thank you for your continued assistance. Please contact me at 781-721-4012 or igladstone@geiconsultants.com, if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.

A blue ink signature of Ileen S. Gladstone, consisting of a series of loops and a long horizontal stroke.

Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President

A blue ink signature of Christopher Coner, featuring a stylized, cursive script.

Christopher Coner, CHMM
Project Manager

MEF/COC:jam
Enclosure

c: Catherine Malagrida, UniFirst Corporation
MassDEP-NERO (as part of Status Report)

B:\Private\04516\2.0 Correspondence\2.4 Residences\Individual Residences\Washington Street\103 Washington\103 Washington St Redevelopment\Sampling Letters\7. December 2024 Sampling NOS\103 Washington NOS Dec 2024.docx



**Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup**

BWSC123

This Notice is Related to:
Release Tracking Number

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

3 - 23246

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Tufts Street
City/Town: Somerville Zip Code: 02145-4129

B. This notice is being provided to the following party:

1. Name: Vera Rodrigues- Hodan Property Management
2. Street Address: 105 Washington Street
City/Town: Somerville, MA Zip Code: 02143

C. This notice is being given to inform its recipient (the party listed in Section B):

- ☒ 1. That environmental sampling ~~will be~~/has been conducted at property owned by the recipient of this notice.
☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling ~~will be~~/has been conducted:

1. Street Address: 103 Washington Street
City/Town: Somerville, MA Zip Code: 02145-4400
2. MCP phase of work during which the sampling ~~will be~~/has been conducted:
- | | |
|---|--|
| ☐ Immediate Response Action | ☐ Phase III Feasibility Evaluation |
| ☐ Release Abatement Measure | ☐ Phase IV Remedy Implementation Plan |
| ☐ Utility-related Abatement Measure | ☒ Phase V/Remedy Operation Status |
| ☐ Phase I Initial Site Investigation | ☐ Post-Temporary Solution Operation, Maintenance and Monitoring |
| ☐ Phase II Comprehensive Site Assessment | ☐ Other _____ |
- (specify)
3. Description of property where sampling ~~will be~~/has been conducted:
☒ residential ☒ commercial ☐ industrial ☐ school/playground ☐ Other _____
(specify)
4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice.
Indoor air and sub-slab soil vapor sampling

E. Contact information related to the party providing this notice:

Contact Name: Ileen Gladstone, P.E., LSP, LEED AP
Street Address: GEI Consultants, Inc., 400 Unicorn Park Drive
City/Town: Woburn, MA Zip Code: 01801-3341
Telephone: (781) 721-4012 Email: igladstone@geiconsultants.com



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3

- 23246

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

January 10, 2025

Project 045163

Ms. Vera Barter
Hodan Property Management
105 Washington Street
Somerville, MA 02143

**Re: Indoor Air and Sub-Slab Soil Vapor Sampling Results
103 Washington Street
Somerville, Massachusetts**

Dear Ms. Barter:

On behalf of the UniFirst Corporation, GEI Consultants, Inc. collected indoor air and sub-slab soil vapor samples on December 4, 2024, at your property at 103 Washington Street to evaluate the potential for vapor intrusion.

On December 4, 2024, one indoor air sample was collected on the first floor, one indoor air sample was collected in the basement, and two indoor air samples were collected from units on the second floor. The first floor is commercial or ancillary space associated with residences, the units on the second floor are above the commercial space or above the open-air parking. The samples were collected over a 24-hour period. Attached is a summary table of the chemicals detected in the indoor air samples (Table 1), and the laboratory data sheets for the recent sampling.

Tetrachloroethylene (PCE) was detected in all four samples. Concentrations of PCE were detected at 0.251 micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) on the first floor, $0.888 \mu\text{g}/\text{m}^3$ in the basement, and $0.176 \mu\text{g}/\text{m}^3$ and $0.264 \mu\text{g}/\text{m}^3$ on the second floor. No other chlorinated volatile organic compounds (CVOCs) were detected in the samples.

On December 4, 2024, GEI collected two soil vapor samples from the previously installed sub-slab monitoring points to evaluate the concentrations of chlorinated VOCs in soil vapor beneath the building. Attached is a summary table of the chemicals detected in the soil vapor samples (Table 2) and the laboratory data sheets for the recent sampling.

PCE was detected in both samples at $2.87 \mu\text{g}/\text{m}^3$ and $60.7 \mu\text{g}/\text{m}^3$ in SV1 and SV2, respectively. Trichloroethylene (TCE) was detected in both samples at $0.333 \mu\text{g}/\text{m}^3$ and $28.9 \mu\text{g}/\text{m}^3$ in SV1 and SV2, respectively. 1,1,1-trichloroethane (1,1,1-TCA) was detected in both samples at concentrations of $0.333 \mu\text{g}/\text{m}^3$ and $28.9 \mu\text{g}/\text{m}^3$ in SV1 and SV2, respectively. Additionally, 1,1-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene (cis-1,2-DCE) and trans-1,2-dichloroethylene (trans-1,2-DCE) were detected above the laboratory reporting limit in SV2.

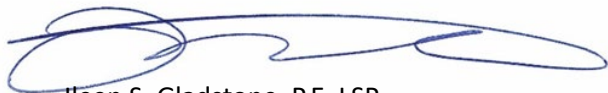
The detected indoor air and soil vapor concentrations are below the applicable MassDEP residential and commercial indoor air threshold values and soil vapor screening values. Soil vapor concentrations that are below the soil vapor screening values generally indicate that the vapor intrusion pathway is unlikely to be of concern under current conditions.

Individuals and public officials may request additional public involvement activities under the Massachusetts Contingency Plan (MCP; 310 CMR 40.1403(9) and 40.1404). The property owner may also request additional documentation, such as that listed at 310 CMR 40.0017(3), associated with the above-referenced samples. We will provide such additional documentation within 30 days of our receipt of such a request.

We appreciate your continued cooperation throughout the sampling process. If you have any questions regarding the sampling results, please do not hesitate to contact me at 781.721.4012 or igladstone@geiconsultants.com.

Sincerely,

GEI Consultants, Inc



Ileen S. Gladstone, P.E, LSP
Senior Vice President



Christopher O. Coner, CHMM
Project Manager

MEF/ISG:jam

B:\Private\04516\2.0 Correspondence\2.4 Residences\Individual Residences\Washington Street\103 Washington\103 Washington St Redevelopment\Sampling Letters\8. December 2024 Results\103 Wash Dec Results Ltr.docx

cc: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

3 - 23246

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Tufts Street
City/Town: Somerville Zip Code: 02145-4129

B. This notice is being provided to the following party:

1. Name: Vera Rodrigues- Hodan Property Management
2. Street Address: 105 Washington Street
City/Town: Somerville, MA Zip Code: 02143

C. This notice is being given to inform its recipient (the party listed in Section B):

- ☒ 1. That environmental sampling ~~will be~~/has been conducted at property owned by the recipient of this notice.
- ☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
- ☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling ~~will be~~/has been conducted:

1. Street Address: 103 Washington Street
City/Town: Somerville, MA Zip Code: 02145-4400
2. MCP phase of work during which the sampling ~~will be~~/has been conducted:
- | | |
|---|--|
| ☐ Immediate Response Action | ☐ Phase III Feasibility Evaluation |
| ☐ Release Abatement Measure | ☐ Phase IV Remedy Implementation Plan |
| ☐ Utility-related Abatement Measure | ☒ Phase V/Remedy Operation Status |
| ☐ Phase I Initial Site Investigation | ☐ Post-Temporary Solution Operation, Maintenance and Monitoring |
| ☐ Phase II Comprehensive Site Assessment | ☐ Other _____ |
- (specify)
3. Description of property where sampling ~~will be~~/has been conducted:
- ☒ residential ☒ commercial ☐ industrial ☐ school/playground ☐ Other _____
- (specify)
4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice.
- Indoor air and sub-slab soil vapor sampling

E. Contact information related to the party providing this notice:

Contact Name: Ileen Gladstone, P.E., LSP, LEED AP
Street Address: GEI Consultants, Inc., 400 Unicorn Park Drive
City/Town: Woburn, MA Zip Code: 01801-3341
Telephone: (781) 721-4012 Email: igladstone@geiconsultants.com



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3

- 23246

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Table 1 - Chemical Testing Results - Indoor Air
103 Washington Street
Somerville, Massachusetts

Sample Location:				First Floor								Basement						Second Floor			
Sample Name:				103Wash-F1 5/10/23		103Wash-F1 7/6/23		103Wash-F1 3/5/24		103Wash-F1 12/4/24		103Wash-B1 7/6/23		103Wash-B1 3/5/24		103Wash-B1 12/4/24		103Wash-UNIT1 12/4/24		103Wash-UNIT3 12/4/24	
Units:				µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv	µg/m3	ppbv
Analyte	Method	MassDEP Residential Indoor Air Threshold Values (µg/m³)	MassDEP Commerical Indoor Air Threshold Values (µg/m³)																		
Volatile Organic Compounds (VOCs)	TO-15																				
cis-1,2-Dichloroethylene		0.8	5.3	<0.079	<0.020	0.107	0.027	<0.079	<0.020	<0.079	<0.020	0.599	0.151	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020
trans-1,2-Dichloroethylene		0.8	53	0.194	0.049	0.852	0.215	<0.079	<0.020	<0.079	<0.020	6.50	1.64	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020
Tetrachloroethylene (PCE)		1.4	4.1	0.278	0.041	0.692	0.102	<0.136	<0.020	0.251	0.037	2.28	0.336	0.325	0.048	0.888	0.131	0.176	0.026	0.264	0.039
Trichloroethylene (TCE)		0.4	1.8	<0.107	<0.020	0.204	0.038	<0.107	<0.020	<0.107	<0.020	0.919	0.171	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. Results highlighted are the most recent samples collected.
6. A sample was not collected from the basement in May 2023 due to fresh air introduction during construction activities.

Table 2 - Chemical Testing Results - Sub-Slab Soil Vapor
103 Washington Street
Somerville, Massachusetts

				103 Washington Street															
				103Wash-SV1								103Wash-SV2							
				5/10/2023				7/6/2023				3/5/2024				12/4/2024			
				Units:															
Analyte	Method	Residential Sub-Slab Soil Gas Screening Values (µg/m³)	Commercial Sub-Slab Soil Gas Screening Values (µg/m³)	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Volatile Organic Compounds (VOCs)	TO-15																		
1,1-Dichloroethane		56	50000	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	<0.081	<0.020	0.125	0.031
1,1-Dichloroethylene		56	12000	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	<0.079	<0.020	0.107	0.027	<0.079	<0.020	<0.079	<0.020
cis-1,2-Dichloroethylene		56	370	1.95	0.493	2.32	0.585	<0.079	<0.020	<0.079	<0.020	9.48	2.39	19.2	4.83	12.2	3.07	6.94	1.75
trans-1,2-Dichloroethylene		56	3700	1.17	0.295	2.39	0.603	<0.079	<0.020	<0.079	<0.020	6.66	1.68	7.41	1.87	2.24	0.565	1.38	0.347
Tetrachloroethylene (PCE)		98	290	28.5	4.21	51.5	7.60	0.210	0.031	2.87	0.423	189	27.9	188	27.7	40.9	6.0	60.7	8.95
1,1,1-Trichloroethane		210	310000	<0.109	<0.020	0.115	0.021	<0.109	<0.020	0.115	0.021	0.175	0.032	0.278	0.051	<0.109	<0.020	0.218	0.040
Trichloroethylene (TCE)		28	120	9.46	1.76	15.7	2.92	<0.107	<0.020	0.333	0.062	98.3	18.3	130	24.1	37.6	7.00	28.9	5.37

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. Results highlighted are the most recent samples collected.

Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-01
 Client ID: 045163-103WASH-F1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:12
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 06:03
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.037	0.020	--	0.251	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	103		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	104		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-06
 Client ID: 045163-103WASH-SV1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 11:22
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/20/24 21:52
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	0.021	0.020	--	0.115	0.109	--		1
Trichloroethene	0.062	0.020	--	0.333	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.423	0.020	--	2.87	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	101		60-140



Consulting
Engineers and
Scientists

December 6, 2024
Project 04516-3

Ms. Vera Rodrigues
Hodan Property Management
105 Washington Street
Somerville, MA 02143

Ms. Vera Rodrigues:

**Re: Indoor Air and Soil Vapor Sampling
105 Washington Street
Somerville, Massachusetts**

Thank you for permitting GEI to conduct indoor air and soil vapor sampling at your property located at 105 Washington Street in Somerville, Massachusetts. Following sampling, we are providing you with a "Notice of Environmental Sampling Form (BWSC-123)," as required by the Massachusetts Department of Environmental Protection (MassDEP). We will also provide you with the results of the indoor air and soil vapor sampling after they are available from the analytical laboratory.

Thank you for your continued assistance. Please contact me at 781-721-4012 or igladstone@geiconsultants.com, if you have any questions.

Sincerely,

GEI CONSULTANTS, INC.



Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President



Christopher Coner, CHMM
Project Manager

MEF/COC:jam
Enclosure

c: Catherine Malagrida, UniFirst Corporation
MassDEP-NERO (as part of Status Report)

B:\Private\04516\2.0 Correspondence\2.4 Residences\Individual Residences\Washington Street\105-107 Washington\105 Washington Redevelopment\Sampling Letters\2024 December NOS\105 Washington NOS Dec 2024.docx



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

3 - 23246

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Tufts Street
City/Town: Somerville Zip Code: 02145-4129

B. This notice is being provided to the following party:

1. Name: Vera Rodrigues- Hodan Property Management
2. Street Address: 105 Washington Street
City/Town: Somerville, MA Zip Code: 02143

C. This notice is being given to inform its recipient (the party listed in Section B):

- ☒ 1. That environmental sampling ~~will be~~ has been conducted at property owned by the recipient of this notice.
- ☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
- ☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling ~~will be~~ has been conducted:

1. Street Address: 105 Washington Street
City/Town: Somerville, MA Zip Code: 02145-4400
2. MCP phase of work during which the sampling ~~will be~~ has been conducted:
- | | |
|---|--|
| ☐ Immediate Response Action | ☐ Phase III Feasibility Evaluation |
| ☐ Release Abatement Measure | ☐ Phase IV Remedy Implementation Plan |
| ☐ Utility-related Abatement Measure | ☒ Phase V/Remedy Operation Status |
| ☐ Phase I Initial Site Investigation | ☐ Post-Temporary Solution Operation, Maintenance and Monitoring |
| ☐ Phase II Comprehensive Site Assessment | ☐ Other _____ |
- (specify)
3. Description of property where sampling ~~will be~~ has been conducted:
- ☒ residential ☒ commercial ☐ industrial ☒ school/playground ☐ Other _____
- (specify)
4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice.
- Indoor Air and Sub-slab soil vapor sampling

E. Contact information related to the party providing this notice:

Contact Name: Ileen Gladstone, P.E., LSP, LEED AP
Street Address: GEI Consultants, Inc., 400 Unicorn Park Drive
City/Town: Woburn, MA Zip Code: 01801-3341
Telephone: (781) 721-4012 Email: igladstone@geiconsultants.com



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3

- 23246

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.



Consulting
Engineers and
Scientists

February 5, 2025
Project 04516-3

Ms. Vera Barter
Hodan Property Management
105 Washington Street
Somerville, MA 20143

Dear Ms. Barter:

**Re: Indoor Air and Soil Vapor Sampling Results
105 Washington Street
Somerville, Massachusetts**

On behalf of the UniFirst Corporation, GEI Consultants, Inc. collected indoor air and soil vapor samples on December 4, 2024 at your property at 105 Washington Street to evaluate the potential for vapor intrusion.

On December 4, 2024, two indoor air samples were collected in the basement, one sample was collected on the first floor, and one sample was collected from the hallway on the second floor. The samples were collected over a 24-hour period. Attached is a summary table of the chemicals detected in the indoor air samples (Table 1), and the laboratory data sheets for the recent sampling.

Tetrachloroethylene (PCE) was detected in all four samples. Concentrations of PCE were detected at 1.40 micrograms per meter cubed ($\mu\text{g}/\text{m}^3$) on the first floor, $1.37 \mu\text{g}/\text{m}^3$ and $0.312 \mu\text{g}/\text{m}^3$ in the basement, and $0.400 \mu\text{g}/\text{m}^3$ on the second floor. Trichloroethylene (TCE) was detected in the first-floor sample at a concentration of $0.107 \mu\text{g}/\text{m}^3$.

GEI collected one soil vapor sample from the previously installed sub-slab monitoring point to evaluate the concentrations of chlorinated VOCs in soil vapor beneath the building. Attached is a summary table of the chemicals detected in the soil vapor samples (Table 2) and the laboratory data sheets for the recent sampling.

Concentrations of PCE, TCE, cis-1,2-dichloroethylene (cis-1,2-DCE), and 1,1,2-trichloroethane were detected above the laboratory reporting limits at concentrations of $1.20 \mu\text{g}/\text{m}^3$, $0.263 \mu\text{g}/\text{m}^3$, $0.091 \mu\text{g}/\text{m}^3$, and $0.115 \mu\text{g}/\text{m}^3$, respectively.

The detected indoor air and soil vapor concentrations are below the applicable MassDEP residential and commercial indoor air threshold values and soil vapor screening values. Soil vapor concentrations that are below the soil vapor screening values generally indicate that the vapor intrusion pathway is unlikely to be of concern under current conditions.

Individuals and public officials may request additional public involvement activities under the Massachusetts Contingency Plan (MCP; 310 CMR 40.1403(9) and 40.1404). The property owner may also request additional documentation, such as that listed at 310 CMR 40.0017(3), associated with the above-referenced samples. We will provide such additional documentation within 30 days of our receipt of such a request.

We appreciate your continued cooperation throughout the sampling process. If you have any questions regarding the sampling results, please do not hesitate to contact me at 781-721-4012 or igladstone@geiconsultants.com.

Sincerely,

GEI CONSULTANTS, INC.



Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President



Christopher Coner, CHMM
Project Manager

MEF/COC:jam
Enclosures

c: Catherine Malagrida, UniFirst Corporation
MassDEP via Status Report



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

3 - 23246

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Tufts Street
City/Town: Somerville Zip Code: 02145-4129

B. This notice is being provided to the following party:

1. Name: Vera Barter- Hodan Property Management
2. Street Address: 105 Washington Street
City/Town: Somerville, MA Zip Code: 02143

C. This notice is being given to inform its recipient (the party listed in Section B):

- ☒ 1. That environmental sampling ~~will be~~ has been conducted at property owned by the recipient of this notice.
☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling ~~will be~~ has been conducted:

1. Street Address: 105 Washington Street
City/Town: Somerville, MA Zip Code: 02145-4400
2. MCP phase of work during which the sampling ~~will be~~ has been conducted:
- | | |
|---|--|
| ☐ Immediate Response Action | ☐ Phase III Feasibility Evaluation |
| ☐ Release Abatement Measure | ☐ Phase IV Remedy Implementation Plan |
| ☐ Utility-related Abatement Measure | ☒ Phase V/Remedy Operation Status |
| ☐ Phase I Initial Site Investigation | ☐ Post-Temporary Solution Operation, Maintenance and Monitoring |
| ☐ Phase II Comprehensive Site Assessment | ☐ Other _____ |
- (specify)
3. Description of property where sampling ~~will be~~ has been conducted:
☒ residential ☒ commercial ☐ industrial ☐ school/playground ☐ Other _____
(specify)
4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice.

Indoor Air and Sub-slab soil vapor sampling

E. Contact information related to the party providing this notice:

Contact Name: Ileen Gladstone, P.E., LSP, LEED AP
Street Address: GEI Consultants, Inc., 400 Unicorn Park Drive
City/Town: Woburn, MA Zip Code: 01801-3341
Telephone: (781) 721-4012 Email: igladstone@geiconsultants.com



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

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NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

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This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Table 1 - Chemical Testing Results - Indoor Air
105 Washington Street
Somerville, Massachusetts

Sample Location: Sample Name: Sample Date: Units:				Basement														
				105WASH-B1 3/15/22		105WASH-B2 3/15/22		105WASH-B1 2/15/23		105WASH-B1 5/10/23		105WASH-B2 5/10/23		105WASH-B1 12/4/24		105WASH-B2 12/4/24		
				µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	
				Analyte	Method	MassDEP Residential Indoor Air Threshold Values (µg/m³)	MassDEP Commerical Indoor Air Threshold Values (µg/m³)											
Volatile Organic Compounds (VOCs)		TO-15																
1,1-Dichloroethane			0.8	710	0.247	0.061	0.113	0.028	<0.081	<0.020	0.174	0.043	0.101	0.025	<0.081	<0.020	<0.081	<0.020
Tetrachloroethylene (PCE)			1.4	4.1	1.15	0.169	0.57	0.084	0.549	0.081	0.841	0.124	0.536	0.079	1.37	0.202	0.312	0.046
Trichloroethylene (TCE)			0.4	1.8	0.247	0.027	<0.107	<0.020	<0.107	<0.020	0.129	0.024	<0.107	<0.020	<0.107	<0.020	<0.107	<0.020

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. Results highlighted are the most recent samples collected.

Table 1 - Chemical Testing Results - Indoor Air
105 Washington Street
Somerville, Massachusetts

Sample Location: Sample Name: Sample Date: Units:				First Floor								Second Floor	
				105WASH-FF1 3/15/22		105WASH-FF1 2/15/23		105WASH-FF1 5/10/23		105WASH-F1 12/4/24		105WASH-F2 12/4/24	
				µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv	µg/m ³	ppbv
Analyte	Method	MassDEP Residential Indoor Air Threshold Values (µg/m ³)	MassDEP Commerical Indoor Air Threshold Values (µg/m ³)										
Volatile Organic Compounds (VOCs)	TO-15												
1,1-Dichloroethane		0.8	710	0.267	0.066	0.138	0.034	0.121	0.03	<0.081	<0.020	<0.081	<0.020
Tetrachloroethylene (PCE)		1.4	4.1	1.05	0.155	1.38	0.203	0.373	0.055	1.40	0.206	0.400	0.059
Trichloroethylene (TCE)		0.4	1.8	0.14	0.026	<0.107	<0.020	<0.107	<0.020	0.107	0.020	<0.107	<0.020

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. Results highlighted are the most recent samples collected.

Table 2 - Chemical Testing Results - Sub-Slab Soil Vapor
105 Washington Street
Somerville, Massachusetts

				105 Washington Street											
				105Wash-SV1		105Wash-SV2		105Wash-SV2		105Wash-SV2		105Wash-SV2		105Wash-SV2	
				8/4/2021		8/4/2021		3/15/2022		2/15/2023		5/10/2023		12/4/2024	
				µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv	µg/m³	ppbv
Analyte	Method	Residential Sub-Slab Soil Gas Screening Values (µg/m³)	Commercial Sub-Slab Soil Gas Screening Values (µg/m³)												
Volatile Organic Compounds (VOCs)	TO-15														
cis-1,2-Dichloroethylene		56	370	<0.793	<0.200	<0.793	<0.200	<0.793	<0.200	<0.079	<0.020	<0.079	<0.020	0.091	0.023
Tetrachloroethylene (PCE)		98	290	132	19.5	110	16.2	4.69	0.691	0.658	0.097	1.86	0.274	1.20	0.177
1,1,2-Trichloroethane		10	50	<1.09	<0.200	<1.09	<0.200	<1.09	<0.200	<0.109	<0.020	<0.109	<0.020	0.115	0.021
Trichloroethylene (TCE)		28	120	8.44	1.57	8.97	1.67	<1.07	<0.200	<0.107	<0.020	0.215	0.04	0.263	0.049

General Notes:

1. Analytes detected in at least one sample are reported here. For a complete list of analytes see the attached laboratory data sheets.
2. µg/m³ = micrograms per cubic meter.
3. ppbv = parts per billion by volume.
4. "<" = The analyte was not detected at a concentration above the specified laboratory reporting limit.
5. Results highlighted are the most recent samples collected.

Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-07
 Client ID: 045163-105WASH-F1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:32
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 08:37
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.020	0.020	--	0.107	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.206	0.020	--	1.40	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	108		60-140
chlorobenzene-d5	107		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-08
 Client ID: 045163-105WASH-B2
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:38
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 09:15
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.046	0.020	--	0.312	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	103		60-140
bromochloromethane	108		60-140
chlorobenzene-d5	107		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-09
 Client ID: 045163-105WASH-F2
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:35
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 09:53
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.059	0.020	--	0.400	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	103		60-140
bromochloromethane	107		60-140
chlorobenzene-d5	106		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-10
 Client ID: 045163-105WASH-B1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 12:41
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 10:31
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.202	0.020	--	1.37	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	102		60-140
bromochloromethane	108		60-140
chlorobenzene-d5	107		60-140



November 22, 2024

Project No. 045163

Ms. Kimberly Wells
City of Somerville Clerk
93 Highland Avenue, 1st Floor
Somerville, MA 02143

**Re: Groundwater Sampling
Certain "Public Ways" and 90 Washington Street
Somerville, Massachusetts**

Dear Ms. Wells:

Thank you for permitting GEI to conduct groundwater sampling on certain public ways and at 90 Washington Street Redevelopment in Somerville, Massachusetts. We are providing you with a "Notice of Environmental Sampling Form (BWSC-123)," as required by the Massachusetts Department of Environmental Protection (MassDEP), following groundwater sampling in November 2024.

Thank you for your continued assistance. Please contact me at 781-721-4012 or igladstone@geiconsultants.com if you have any questions.

Sincerely,

GEI Consultants, Inc



Ileen S. Gladstone, P.E., LSP, LEED AP
Senior Vice President



Christopher Coner, CHMM
Project Manager

MEF/CC:jam

B:\Private\04516\2.0 Correspondence\2.12 Subsurface\2.12.2 Groundwater Evaluation\Semi-Annual GW 2024 Nov\City\GW NOS\City 11-2024 GW NOS Ltr.docx

cc: Catherine Malagrida, UniFirst Corporation
Jill Lathan, City of Somerville
MassDEP NERO (as part of Status Report)



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

3 - 23246

A. The address of the disposal site related to this Notice and Release Tracking Number (provided above):

1. Street Address: 50 Tufts Street
City/Town: Somerville Zip Code: 02145-4129

B. This notice is being provided to the following party:

1. Name: Ms. Kimberly Wells
2. Street Address: 93 Highland Ave, 1st Floor
City/Town: Somerville, MA Zip Code: 02143

C. This notice is being given to inform its recipient (the party listed in Section B):

- ☒ 1. That environmental sampling ~~will be~~/has been conducted at property owned by the recipient of this notice.
- ☐ 2. Of the results of environmental sampling conducted at property owned by the recipient of this notice.
- ☐ 3. Check to indicate if the analytical results are attached. (If item 2. above is checked, the analytical results from the environmental sampling must be attached to this notice.)

D. Location of the property where the environmental sampling ~~will be~~/has been conducted:

1. Street Address: 90 Washington Street and Somerville City Streets
City/Town: Somerville, MA Zip Code: 02145
2. MCP phase of work during which the sampling will be/has been conducted:
- | | |
|---|--|
| ☐ Immediate Response Action | ☐ Phase III Feasibility Evaluation |
| ☐ Release Abatement Measure | ☐ Phase IV Remedy Implementation Plan |
| ☐ Utility-related Abatement Measure | ☒ Phase V/Remedy Operation Status |
| ☐ Phase I Initial Site Investigation | ☐ Post-Temporary Solution Operation, Maintenance and Monitoring |
| ☐ Phase II Comprehensive Site Assessment | ☐ Other _____ |
- (specify)
3. Description of property where sampling ~~will be~~/has been conducted:
- ☐ residential ☐ commercial ☐ industrial ☐ school/playground ☒ Other City Streets
- (specify)
4. Description of the sampling locations and types (e.g., soil, groundwater, indoor air, soil gas) to the extent known at the time of this notice.

Semi-Annual Groundwater Sampling

E. Contact information related to the party providing this notice:

Contact Name: Ileen Gladstone, P.E., LSP, LEED AP
Street Address: GEI Consultants, Inc., 400 Unicorn Park Drive
City/Town: Woburn, MA Zip Code: 01801-3341
Telephone: (781) 721-4012 Email: igladstone@geiconsultants.com



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC123

This Notice is Related to:
Release Tracking Number

3 - 23246

NOTICE OF ENVIRONMENTAL SAMPLING

As required by 310 CMR 40.1403(10) of the Massachusetts Contingency Plan

MASSACHUSETTS REGULATIONS THAT REQUIRE THIS NOTICE

This notice is being provided pursuant to the Massachusetts Contingency Plan and the notification requirement at 310 CMR 40.1403(10). The Massachusetts Contingency Plan is a state regulation that specifies requirements for parties who are taking actions to address releases of chemicals (oil or hazardous material) to the environment.

THE PERSON(S) PROVIDING THIS NOTICE

This notice has been sent to you by the party who is addressing a release of oil or hazardous material to the environment at the location listed in **Section A** on the reverse side of this form. (The regulations refer to the area where the oil or hazardous material is present as the "disposal site".)

PURPOSE OF THIS NOTICE

When environmental samples are taken as part of an investigation of a release for which a notification to MassDEP has been made under the Massachusetts Contingency Plan (310 CMR 40.0300) on behalf of someone other than the owner of the property, the regulations require that the property owner (listed in **Section B** on the reverse side of this form) be given notice of the environmental sampling. The regulations also require that the property owner subsequently receive the analytical results following the analysis of the environmental samples.

Section C on the reverse side of this form indicates the circumstance under which you are receiving this notice at this time. If you are receiving this notice to inform you of the analytical results following the analysis of the environmental samples, you should also have received, as an attachment, a copy of analytical results. These results should indicate the number and type(s) of samples (e.g., soil, groundwater) analyzed, any chemicals identified, and the measured concentrations of those chemicals.

Section D on the reverse side of this form identifies the property where the environmental sampling will be/has been conducted, provides a description of the sampling locations within the property, and indicates the phase of work under the Massachusetts Contingency Plan regulatory process during which the samples will be/were collected.

FOR MORE INFORMATION

Information about the general process for addressing releases of oil or hazardous material under the Massachusetts Contingency Plan and related public involvement opportunities may be found at <http://www.mass.gov/eea/agencies/massdep/cleanup>. For more information regarding this notice, you may contact the party listed in **Section E** on the reverse side of this form. Information about the disposal site identified in Section A is also available in files at the Massachusetts Department of Environmental Protection. See <http://public.dep.state.ma.us/SearchableSites2/Search.aspx> to view site-specific files on-line or <http://mass.gov/eea/agencies/massdep/about/contacts/conduct-a-file-review.html> if you would like to make an appointment to see these files in person. Please reference the **Release Tracking Number** listed in the upper right hand corner on the reverse side of this form when making file review appointments.

Appendix C Kleinfelder Soil, GLX Soil Precharacterization Data, and Contained-In Determinations



Tables

Analyte	Start Date	End 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	WS-639		WS-640		WS-641		WS-642		WS-643		WS-644		WS-645		WS-646		WS-647		WS-648		WS-649		WS-650		WS-651		WS-652		WS-653		WS-654		WS-655		WS-656		WS-657		WS-658		WS-659		WS-660		WS-661		WS-662		WS-663		WS-664		WS-665		WS-666		WS-667		WS-668		WS-669		WS-670		WS-671		WS-672		WS-673		WS-674		WS-675		WS-676		WS-677		WS-678		WS-679		WS-680		WS-681		WS-682		WS-683		WS-684		WS-685		WS-686		WS-687		WS-688		WS-689		WS-690		WS-691		WS-692		WS-693		WS-694		WS-695		WS-696		WS-697		WS-698		WS-699		WS-700		WS-701		WS-702		WS-703		WS-704		WS-705		WS-706		WS-707		WS-708		WS-709		WS-710		WS-711		WS-712		WS-713		WS-714		WS-715		WS-716		WS-717		WS-718		WS-719		WS-720		WS-721		WS-722		WS-723		WS-724		WS-725		WS-726		WS-727		WS-728		WS-729		WS-730		WS-731		WS-732		WS-733		WS-734		WS-735		WS-736		WS-737		WS-738		WS-739		WS-740		WS-741		WS-742		WS-743		WS-744		WS-745		WS-746		WS-747		WS-748		WS-749		WS-750		WS-751		WS-752		WS-753		WS-754		WS-755		WS-756		WS-757		WS-758		WS-759		WS-760		WS-761		WS-762		WS-763		WS-764		WS-765		WS-766		WS-767		WS-768		WS-769		WS-770		WS-771		WS-772		WS-773		WS-774		WS-775		WS-776		WS-777		WS-778		WS-779		WS-780		WS-781		WS-782		WS-783		WS-784		WS-785		WS-786		WS-787		WS-788		WS-789		WS-790		WS-791		WS-792		WS-793		WS-794		WS-795		WS-796		WS-797		WS-798		WS-799		WS-800		WS-801		WS-802		WS-803		WS-804		WS-805		WS-806		WS-807		WS-808		WS-809		WS-810		WS-811		WS-812		WS-813		WS-814		WS-815		WS-816		WS-817		WS-818		WS-819		WS-820		WS-821		WS-822		WS-823		WS-824		WS-825		WS-826		WS-827		WS-828		WS-829		WS-830		WS-831		WS-832		WS-833		WS-834		WS-835		WS-836		WS-837		WS-838		WS-839		WS-840		WS-841		WS-842		WS-843		WS-844		WS-845		WS-846		WS-847		WS-848		WS-849		WS-850		WS-851		WS-852		WS-853		WS-854		WS-855		WS-856		WS-857		WS-858		WS-859		WS-860		WS-861		WS-862		WS-863		WS-864		WS-865		WS-866		WS-867		WS-868		WS-869		WS-870		WS-871		WS-872		WS-873		WS-874		WS-875		WS-876		WS-877		WS-878		WS-879		WS-880		WS-881		WS-882		WS-883		WS-884		WS-885		WS-886		WS-887		WS-888		WS-889		WS-890		WS-891		WS-892		WS-893		WS-894		WS-895		WS-896		WS-897		WS-898		WS-899		WS-900		WS-901		WS-902		WS-903		WS-904		WS-905		WS-906		WS-907		WS-908		WS-909		WS-910		WS-911		WS-912		WS-913		WS-914		WS-915		WS-916		WS-917		WS-918		WS-919		WS-920		WS-921		WS-922		WS-923		WS-924		WS-925		WS-926		WS-927		WS-928		WS-929		WS-930		WS-931		WS-932		WS-933		WS-934		WS-935		WS-936		WS-937		WS-938		WS-939		WS-940		WS-941		WS-942		WS-943		WS-944		WS-945		WS-946		WS-947		WS-948		WS-949		WS-950		WS-951		WS-952		WS-953		WS-954		WS-955		WS-956		WS-957		WS-958	
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Analyte	Start Depth		Location		KE-211-WS 6	KE-211-WS 24	KE-211-WS 28
	RCSS-1 End Depth	RCSS-2 End Depth	326/24/4	326/24/4			
1,1,1,2-tetrachloroethane	0.1	0.1	mg/kg	0.0023			<0.0015
1,1,1-trichloroethane	30	600	mg/kg	0.00			<0.0015
1,1,2-trichloroethane	0.05	0.2	mg/kg	0.0011			<0.0015
1,2-dichloroethane	0.1	2	mg/kg	0.0023			<0.0015
1,2-dichlorobenzene	0.1	2	mg/kg	0.0023			<0.0015
1,2,4-trichlorobenzene	0.01	0.1	mg/kg	0.0048			<0.0015
1,2,4,5-tetrachlorobenzene	0.01	0.1	mg/kg	<0.0011			<0.0076
2,2,3,3-tetrachloropentane	100	1000	mg/kg	0.0023			<0.0015
2,2,3,4-tetrachloropentane	2	6	mg/kg	<0.0011			<0.0076
2,2,3,5-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,4-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,5-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,6-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,7-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,8-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,9-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,10-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,11-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,12-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,13-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,14-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,15-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,16-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,17-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,18-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,19-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,20-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,21-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,22-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,23-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,24-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,25-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,26-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,27-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,28-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,29-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,30-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,31-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,32-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,33-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,34-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,35-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,36-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,37-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,38-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,39-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,40-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,41-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,42-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,43-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,44-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,45-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,46-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,47-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,48-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,49-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,50-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,51-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,52-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,53-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,54-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,55-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,56-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,57-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,58-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,59-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,60-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,61-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,62-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,63-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,64-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,65-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,66-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,67-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,68-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,69-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,70-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,71-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,72-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,73-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,74-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,75-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,76-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,77-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,78-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,79-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,80-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,81-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,82-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,83-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,84-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,85-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,86-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,87-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,88-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,89-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,90-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,91-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,92-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,93-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,94-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,95-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,96-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,97-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,98-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,99-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,100-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,101-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,102-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,103-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,104-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,105-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,106-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,107-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,108-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,109-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,110-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,111-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,112-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,113-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,114-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,115-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,116-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,117-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,118-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,119-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,120-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,121-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,122-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,123-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,124-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,125-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,126-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,127-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,128-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,129-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,130-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,131-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,132-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,133-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,134-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,135-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,136-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,137-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,138-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,139-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,140-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,141-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,142-tetrachloropentane	100	1000	mg/kg	<0.0011			<0.0076
2,2,4,143-tetrachloropentane	100	1000					

Notes:

Bold - Analyte detected above laboratory detection limits

Bold and Shaded (Blue) - AnalyMe detected above RCS-1

Underlined - Analyte detected above RCS-2

Bold and Gray: RL > RCS-1

- No standard promulgated
NT - Not tested

THE FOLIOLEDGE

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-306-1		GLX-TPW-307-1.5		GLX-TPW-307-1.5		GLX-TPW-201-1.5		GLX-TPW-201-7		GLX-TPW-308-0.5	
SAMPLING DATE							5/23/2019		5/23/2019		5/23/2019		5/23/2019		5/23/2019		5/23/2019	
LAB SAMPLE ID							L1921946-01		L1921946-04		L1921946-04 R1		L1921946-07		L1921946-13		L1921946-16	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																		
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																		
Solids, Total	NONE					%	93.3		87.9		-	-	86.8		81.1		94.2	
MCP Volatile Organics by EPA 5035																		
Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0043	U	0.0064	U	0.0058	U	0.3	U	0.0043	U	0.21	U
1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
Chloroform	67-66-3			0.2	0.2	mg/kg	0.0013	U	0.0019	U	0.0018	U	0.089	U	0.0013	U	0.063	U
Carbon tetrachloride	56-23-5			5	5	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
Tetrachloroethene	127-18-4			1	1	mg/kg	0.0006		0.00064	U	0.00058	U	0.03	U	0.0066		1.1	
Chlorobenzene	108-90-7			1	1	mg/kg	0.00043	U	0.00064	U	0.00058	U	0.03	U	0.00043	U	0.021	U
Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0034	U	0.0051	U	0.0047	U	0.24	U	0.0034	U	0.17	U
1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00043	U	0.0009		0.00058	U	0.03	U	0.002		0.021	U
Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00043	U	0.00064	U	0.00058	U	0.03	U	0.00043	U	0.021	U
trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00043	U	0.00064	U	0.00058	U	0.03	U	0.00043	U	0.021	U
1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00043	U	0.00064	U	0.00058	U	0.03	U	0.00043	U	0.021	U
1,1-Dichloropropene	563-58-6				NS	mg/kg	0.00043	U	0.00064	U	0.00058	U	0.03	U	0.00043	U	0.021	U
Bromoform	75-25-2			0.1	0.1	mg/kg	0.0034	U	0.0051	U	0.0047	U	0.24	U	0.0034	U	0.17	U
1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00043	U	0.00064	U	0.00058	U	0.03	U	0.00043	U	0.021	U
Benzene	71-43-2			2	2	mg/kg	0.00043	U	0.00064	U	0.00058	U	0.03	U	0.00043	U	0.021	U
Toluene	108-88-3			30	30	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
Ethylbenzene	100-41-4			40	40	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
Chloromethane	74-87-3			100	NS	mg/kg	0.0034	U	0.0051	U	0.0047	U	0.24	U	0.0034	U	0.17	U
Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
Chloroethane	75-00-3			100	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.0013	U	0.0019	U	0.0018	U	0.089	U	0.0013	U	0.063	U
Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00043	U	0.00064	U	0.00058	U	0.03	U	0.0007		0.03	
1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
p/m-Xylene	179601-23-1			100	100	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
o-Xylene	95-47-6			100	100	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
Xylenes, Total	1330-20-7			100	100	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
Dibromomethane	74-95-3			500	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
Styrene	100-42-5			3	3	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.0086	U	0.013	U	0.012	U	0.59	U	0.0085	U	0.42	U
Acetone	67-64-1			6	6	mg/kg	0.23		0.052		0.032		0.59	U	0.049		0.42	U
Carbon disulfide	75-15-0			100	NS	mg/kg	0.0086	U	0.013	U	0.012	U	0.59	U	0.0085	U	0.42	U
Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.0086	U	0.013	U	0.012	U	0.59	U	0.0085	U	0.42	U
Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.0086	U	0.013	U	0.012	U	0.59	U	0.0085	U	0.42	U
2-Hexanone	591-78-6			100	NS	mg/kg	0.0086	U	0.013	U	0.012	U	0.59	U	0.0085	U	0.42	U
Bromochloromethane	74-97-5				NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0034	U	0.0051	U	0.0047	U	0.24	U	0.0034	U	0.17	U
2,2-Dichloropropane	594-20-7				NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
1,3-Dichloropropane	142-28-9			500	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
1,1,1,2-Tetrachloroethane	630-20-6			0.1	0.1	mg/kg	0.00043	U	0.00064	U	0.00058	U	0.03	U	0.00043	U	0.021	U
Bromobenzene	108-86-1			100	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
n-Butylbenzene	104-51-8				NS	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
sec-Butylbenzene	135-98-8				NS	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
tert-Butylbenzene	98-06-6			100	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
o-Chlorotoluene	95-49-8			100	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
p-Chlorotoluene	106-43-4				NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
1,2-Dibromo-3-chloropropane	96-12-8			10	NS	mg/kg	0.0026	U	0.0038	U	0.0035	U	0.18	U	0.0026	U	0.13	U
Hexachlorobutadiene	87-68-3			30	30	mg/kg	0.0034	U	0.0051	U	0.0047	U	0.24	U	0.0034	U	0.17	U
Isopropylbenzene	98-82-8			1000	NS	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION								GLX-TPW-306-1		GLX-TPW-307-1.5		GLX-TPW-307-1.5		GLX-TPW-201-1.5		GLX-TPW-201-7		GLX-TPW-308-0.5	
SAMPLING DATE								5/23/2019		5/23/2019		5/23/2019		5/23/2019		5/23/2019		5/23/2019	
LAB SAMPLE ID								L1921946-01		L1921946-04		L1921946-04 R1		L1921946-07		L1921946-13		L1921946-16	
SAMPLE TYPE								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																			
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035																			
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
	Naphthalene	91-20-3			4	4	mg/kg	0.0034	U	0.0051	U	0.0047	U	0.24	U	0.0034	U	0.17	U
	n-Propylbenzene	103-65-1			100	NS	mg/kg	0.00086	U	0.0013	U	0.0012	U	0.059	U	0.00085	U	0.042	U
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
	Diethyl ether	60-29-7			100	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
	Diisopropyl Ether	108-20-3			100	NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg	0.0017	U	0.0026	U	0.0023	U	0.12	U	0.0017	U	0.084	U
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg	0.068	U	0.1	U	0.094	U	4.7	U	0.068	U	3.4	U
	Total VOCs		10	4			mg/kg												

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria.
Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-309-0.5		GLX-TPW-310-0.5		GLX-TPW-311-0.5		GLX-TPW-215-2.5		GLX-TPW-501-4.5		GLX-TPW-502-2.5	
SAMPLING DATE							5/23/2019		5/23/2019		5/23/2019		5/23/2019		5/23/2019		5/23/2019	
LAB SAMPLE ID							L1921946-19		L1921946-22		L1921946-25		L1921946-28		L1921946-31		L1921946-32	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																		
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																		
Solids, Total	NONE					%	94.6		93.3		96.4		92.1		89.4		93.3	
MCP Volatile Organics by EPA 5035																		
Methylene chloride	75-09-2			0.1	NS	mg/kg	0.28	U	0.24	U	0.0035	U	0.0048	U	0.0037	U	0.0042	U
1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
Chloroform	67-66-3			0.2	0.2	mg/kg	0.085	U	0.072	U	0.001	U	0.0014	U	0.0011	U	0.0013	U
Carbon tetrachloride	56-23-5			5	5	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
Tetrachloroethene	127-18-4			1	1	mg/kg	1.9		0.43		0.00035	U	0.0088		0.0011		0.00096	
Chlorobenzene	108-90-7			1	1	mg/kg	0.028	U	0.024	U	0.00035	U	0.00048	U	0.00037	U	0.00042	U
Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.23	U	0.19	U	0.0028	U	0.0038	U	0.003	U	0.0034	U
1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.028	U	0.024	U	0.00035	U	0.00048	U	0.0011		0.0022	
Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.028	U	0.024	U	0.00035	U	0.00048	U	0.00037	U	0.00042	U
trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.028	U	0.024	U	0.00035	U	0.00048	U	0.00037	U	0.00042	U
1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.028	U	0.024	U	0.00035	U	0.00048	U	0.00037	U	0.00042	U
1,1-Dichloropropene	563-58-6				NS	mg/kg	0.028	U	0.024	U	0.00035	U	0.00048	U	0.00037	U	0.00042	U
Bromoform	75-25-2			0.1	0.1	mg/kg	0.23	U	0.19	U	0.0028	U	0.0038	U	0.003	U	0.0034	U
1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.028	U	0.024	U	0.00035	U	0.00048	U	0.00037	U	0.00042	U
Benzene	71-43-2			2	2	mg/kg	0.028	U	0.024	U	0.00035	U	0.00048	U	0.00037	U	0.00042	U
Toluene	108-88-3			30	30	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.0018		0.00085	U
Ethylbenzene	100-41-4			40	40	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
Chloromethane	74-87-3			100	NS	mg/kg	0.23	U	0.19	U	0.0028	U	0.0038	U	0.003	U	0.0034	U
Bromomethane	74-83-9			0.5	0.5	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
Chloroethane	75-00-3			100	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.085	U	0.072	U	0.001	U	0.0014	U	0.0011	U	0.0013	U
Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.052		0.024	U	0.00035	U	0.0007		0.0013		0.0012	
1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.11		0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
p/m-Xylene	179601-23-1			100	100	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
o-Xylene	95-47-6			100	100	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
Xylenes, Total	1330-20-7			100	100	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
Dibromomethane	74-95-3			500	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
Styrene	100-42-5			3	3	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.57	U	0.48	U	0.007	U	0.0095	U	0.0075	U	0.0085	U
Acetone	67-64-1			6	6	mg/kg	0.57	U	0.48	U	0.24	E	0.023		0.033		0.015	
Carbon disulfide	75-15-0			100	NS	mg/kg	0.57	U	0.48	U	0.007	U	0.0095	U	0.0075	U	0.0085	U
Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.57	U	0.48	U	0.007	U	0.0095	U	0.0075	U	0.0085	U
Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.57		0.48		0.007	U	0.0095	U	0.0075	U	0.0085	U
2-Hexanone	591-78-6			100	NS	mg/kg	0.57	U	0.48	U	0.007	U	0.0095	U	0.0075	U	0.0085	U
Bromochloromethane	74-97-5				NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.23	U	0.19	U	0.0028	U	0.0038	U	0.003	U	0.0034	U
2,2-Dichloropropane	594-20-7				NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
1,3-Dichloropropane	142-28-9			500	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
1,1,1,2-Tetrachloroethane	630-20-6			0.1	0.1	mg/kg	0.028	U	0.024	U	0.00035	U	0.00048	U	0.00037	U	0.00042	U
Bromobenzene	108-86-1			100	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
n-Butylbenzene	104-51-8				NS	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
sec-Butylbenzene	135-98-8				NS	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
tert-Butylbenzene	98-06-6			100	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
o-Chlorotoluene	95-49-8			100	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
p-Chlorotoluene	106-43-4				NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
1,2-Dibromo-3-chloropropane	96-12-8			10	NS	mg/kg	0.17	U	0.14	U	0.0021	U	0.0029	U	0.0022	U	0.0026	U
Hexachlorobutadiene	87-68-3			30	30	mg/kg	0.23	U	0.19	U	0.0028	U	0.0038	U	0.003	U	0.0034	U
Isopropylbenzene	98-82-8			1000	NS	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-309-0.5		GLX-TPW-310-0.5		GLX-TPW-311-0.5		GLX-TPW-215-2.5		GLX-TPW-501-4.5		GLX-TPW-502-2.5	
SAMPLING DATE							5/23/2019		5/23/2019		5/23/2019		5/23/2019		5/23/2019		5/23/2019	
LAB SAMPLE ID							L1921946-19		L1921946-22		L1921946-25		L1921946-28		L1921946-31		L1921946-32	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																		
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035																		
	p-Isopropyltoluene	99-87-6		100	NS	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
	Naphthalene	91-20-3		4	4	mg/kg	0.23	U	0.19	U	0.0028	U	0.0038	U	0.003	U	0.0034	U
	n-Propylbenzene	103-65-1		100	NS	mg/kg	0.057	U	0.048	U	0.0007	U	0.00095	U	0.00075	U	0.00085	U
	1,2,3-Trichlorobenzene	87-61-6			NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
	1,2,4-Trichlorobenzene	120-82-1		2	2	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
	1,3,5-Trimethylbenzene	108-67-8		10	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
	1,2,4-Trimethylbenzene	95-63-6		1000	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
	Diethyl ether	60-29-7		100	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
	Diisopropyl Ether	108-20-3		100	NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
	Ethyl-Tert-Butyl-Ether	637-92-3			NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
	Tertiary-Amyl Methyl Ether	994-05-8			NS	mg/kg	0.11	U	0.096	U	0.0014	U	0.0019	U	0.0015	U	0.0017	U
	1,4-Dioxane	123-91-1		0.2	0.2	mg/kg	4.5	U	3.8	U	0.056	U	0.076	U	0.06	U	0.068	U
	Total VOCs		10	4		mg/kg												

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.

Gray shading indicates nondetect detection limit is above one or more of the listed criteria.

Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.

² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

								RAM PLAN											
LOCATION								GLX-TPW-214-3.5		GLX-TPW-212-3.5'		GLX-TPW-204-6'		GLX-TPW-213-4.5'		GLX-TPW-312-0.5'		GLX-TPW-203-6'	
SAMPLING DATE								5/23/2019		5/24/2019		5/24/2019		5/24/2019		5/24/2019		5/24/2019	
LAB SAMPLE ID								L1921946-33		L1922181-03		L1922181-09		L1922181-12		L1922181-15		L1922181-21	
SAMPLE TYPE								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																			
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	
General Chemistry																			
Solids, Total	NONE					%	91.8		89.6		91.7		90.8		91.8		94.1		
MCP Volatile Organics by EPA 5035																			
	Methylene chloride	75-09-2			0.1	NS	mg/kg	0.22	U	0.0041	U	0.0048	U	0.54	U	0.21	U	0.0049	U
	1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	Chloroform	67-66-3			0.2	0.2	mg/kg	0.066	U	0.0012	U	0.0014	U	0.16	U	0.064	U	0.0015	U
	Carbon tetrachloride	56-23-5			5	5	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	Tetrachloroethene	127-18-4			1	1	mg/kg	7.9		0.001		0.016		14		1		0.0016	
	Chlorobenzene	108-90-7			1	1	mg/kg	0.022	U	0.00041	U	0.00048	U	0.054	U	0.021	U	0.00049	U
	Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.18	U	0.0033	U	0.0039	U	0.44	U	0.17	U	0.0039	U
	1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.17		0.00041	U	0.0023		0.21		0.021	U	0.00049	U
	Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.022	U	0.00041	U	0.00048	U	0.054	U	0.021	U	0.00049	U
	trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.022	U	0.00041	U	0.00048	U	0.054	U	0.021	U	0.00049	U
	1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.022	U	0.00041	U	0.00048	U	0.054	U	0.021	U	0.00049	U
	1,1-Dichloropropene	563-58-6				NS	mg/kg	0.022	U	0.00041	U	0.00048	U	0.054	U	0.021	U	0.00049	U
	Bromoform	75-25-2			0.1	0.1	mg/kg	0.18	U	0.0033	U	0.0039	U	0.44	U	0.17	U	0.0039	U
	1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.022	U	0.00041	U	0.00048	U	0.054	U	0.021	U	0.00049	U
	Benzene	71-43-2			2	2	mg/kg	0.022	U	0.0006		0.00048	U	0.054	U	0.021	U	0.00049	U
	Toluene	108-88-3			30	30	mg/kg	0.044	U	0.00082	U	0.0015		0.11	U	0.043	U	0.00098	U
	Ethylbenzene	100-41-4			40	40	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	Chloromethane	74-87-3			100	NS	mg/kg	0.18	U	0.0033	U	0.0039	U	0.44	U	0.17	U	0.0039	U
	Bromomethane	74-83-9			0.5	0.5	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	Chloroethane	75-00-3			100	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.066	U	0.0012	U	0.0014	U	0.16	U	0.064	U	0.0015	U
	Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.16		0.0012		0.0014		0.58		0.021	U	0.00049	U
	1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	p/m-Xylene	179601-23-1			100	100	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	o-Xylene	95-47-6			100	100	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	Xylenes, Total	1330-20-7			100	100	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.044	U	0.0034		0.00097	U	0.11	U	0.043	U	0.00098	U
	1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.044	U	0.0034		0.00097	U	0.11	U	0.043	U	0.00098	U
	Dibromomethane	74-95-3			500	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	Styrene	100-42-5			3	3	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.44	U	0.0082	U	0.0097	U	1.1	U	0.43	U	0.0098	U
	Acetone	67-64-1			6	6	mg/kg	0.44	U	0.028		0.039		1.1	U	0.43	U	0.027	
	Carbon disulfide	75-15-0			100	NS	mg/kg	0.44	U	0.0082	U	0.0097	U	1.1	U	0.43	U	0.0098	U
	Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.44	U	0.0082	U	0.0097	U	1.1	U	0.43	U	0.0098	U
	Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.44	U	0.0082	U	0.0097	U	1.1	U	0.43	U	0.0098	U
	2-Hexanone	591-78-6			100	NS	mg/kg	0.44	U	0.0082	U	0.0097	U	1.1	U	0.43	U	0.0098	U
	Bromochloromethane	74-97-5				NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.18	U	0.0033	U	0.0039	U	0.44	U	0.17	U	0.0039	U
	2,2-Dichloropropane	594-20-7				NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	1,3-Dichloropropane	142-28-9			500	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,1,1,2-Tetrachloroethane	630-20-6			0.1	0.1	mg/kg	0.022	U	0.00041	U	0.00048	U	0.054	U	0.021	U	0.00049	U
	Bromobenzene	108-86-1			100	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	n-Butylbenzene	104-51-8				NS	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	sec-Butylbenzene	135-98-8				NS	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	tert-Butylbenzene	98-06-6			100	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	o-Chlorotoluene	95-49-8			100	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	p-Chlorotoluene	106-43-4				NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,2-Dibromo-3-chloropropane	96-12-8			10	NS	mg/kg	0.13	U	0.0025	U	0.0029	U	0.33	U	0.13	U	0.0029	U
	Hexachlorobutadiene	87-68-3			30	30	mg/kg	0.18	U	0.0033	U	0.0039	U	0.44	U	0.17	U	0.0039	U
	Isopropylbenzene	98-82-8			1000	NS	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

								RAM PLAN											
LOCATION								GLX-TPW-214-3.5		GLX-TPW-212-3.5'		GLX-TPW-204-6'		GLX-TPW-213-4.5'		GLX-TPW-312-0.5'		GLX-TPW-203-6'	
SAMPLING DATE								5/23/2019		5/24/2019		5/24/2019		5/24/2019		5/24/2019		5/24/2019	
LAB SAMPLE ID								L19221946-33		L1922181-03		L1922181-09		L1922181-12		L1922181-15		L1922181-21	
SAMPLE TYPE								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																			
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035																			
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	Naphthalene	91-20-3			4	4	mg/kg	0.18	U	0.0033	U	0.0039	U	0.44	U	0.17	U	0.0039	U
	n-Propylbenzene	103-65-1			100	NS	mg/kg	0.044	U	0.00082	U	0.00097	U	0.11	U	0.043	U	0.00098	U
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	Diethyl ether	60-29-7			100	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	Diisopropyl Ether	108-20-3			100	NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg	0.089	U	0.0016	U	0.0019	U	0.22	U	0.086	U	0.002	U
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg	3.5	U	0.066	U	0.078	U	8.7	U	3.4	U	0.078	U
	Total VOCs		10	4			mg/kg												

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.

Gray shading indicates nondetect detection limit is above one or more of the listed criteria.

Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.

² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-305-0.5'		GLX-TPW-205-8'		GLX-TPW-201-5		GLX-TPW-204-4.5'		GLX-TPW-203-4.5'		GLX-TPW-205-3.5'	
SAMPLING DATE							5/24/2019		5/24/2019		5/23/2019		5/24/2019		5/24/2019		5/24/2019	
LAB SAMPLE ID							L1922181-29		L1922181-30		L1922758-01		L1922773-01		L1922773-02		L1922773-03	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																		
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																		
Solids, Total	NONE					%	95.8		95		80.2		93.5		92.2		95.8	
MCP Volatile Organics by EPA 5035																		
Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0045	U	0.0044	U	0.0032	U	0.0045	U	0.0042	U	0.0035	U
1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
Chloroform	67-66-3			0.2	0.2	mg/kg	0.0013	U	0.0013	U	0.00096	U	0.0014	U	0.0012	U	0.0011	U
Carbon tetrachloride	56-23-5			5	5	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
Tetrachloroethene	127-18-4			1	1	mg/kg	0.00045	U	0.006		0.00032	U	0.0094		0.00042		0.0057	
Chlorobenzene	108-90-7			1	1	mg/kg	0.00045	U	0.00044	U	0.00032	U	0.00045	U	0.00042	U	0.00035	U
Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0036	U	0.0036	U	0.0026	U	0.0036	U	0.0033	U	0.0028	U
1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00045	U	0.00044	U	0.00032	U	0.0018		0.00042	U	0.00035	U
Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00045	U	0.00044	U	0.00032	U	0.00045	U	0.00042	U	0.00035	U
trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00045	U	0.00044	U	0.00032	U	0.00045	U	0.00042	U	0.00035	U
1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00045	U	0.00044	U	0.00032	U	0.00045	U	0.00042	U	0.00035	U
1,1-Dichloropropene	563-58-6				NS	mg/kg	0.00045	U	0.00044	U	0.00032	U	0.00045	U	0.00042	U	0.00035	U
Bromoform	75-25-2			0.1	0.1	mg/kg	0.0036	U	0.0036	U	0.0026	U	0.0036	U	0.0033	U	0.0028	U
1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00045	U	0.00044	U	0.00032	U	0.00045	U	0.00042	U	0.00035	U
Benzene	71-43-2			2	2	mg/kg	0.00045	U	0.00044	U	0.00032	U	0.00045	U	0.00042	U	0.00035	U
Toluene	108-88-3			30	30	mg/kg	0.00099		0.0014		0.00064	U	0.00091	U	0.00083	U	0.0011	
Ethylbenzene	100-41-4			40	40	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
Chloromethane	74-87-3			100	NS	mg/kg	0.0036	U	0.0036	U	0.0026	U	0.0036	U	0.0033	U	0.0028	U
Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
Chloroethane	75-00-3			100	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.0013	U	0.0013	U	0.00096	U	0.0014	U	0.0012	U	0.0011	U
Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00045	U	0.00057		0.00032	U	0.00098		0.00042	U	0.00056	
1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
p/m-Xylene	179601-23-1			100	100	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
o-Xylene	95-47-6			100	100	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
Xylenes, Total	1330-20-7			100	100	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
Dibromomethane	74-95-3			500	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
Styrene	100-42-5			3	3	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.009	U	0.0089	U	0.0064	U	0.0091	U	0.0083	U	0.0071	U
Acetone	67-64-1			6	6	mg/kg	0.33	E	0.049		0.032		0.017		0.017		0.15	
Carbon disulfide	75-15-0			100	NS	mg/kg	0.009	U	0.0089	U	0.0064	U	0.0091	U	0.0083	U	0.0071	U
Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.016		0.0089	U	0.0064	U	0.0091	U	0.0083	U	0.0071	U
Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.009	U	0.0089	U	0.0064	U	0.0091	U	0.0083	U	0.0071	U
2-Hexanone	591-78-6			100	NS	mg/kg	0.009	U	0.0089	U	0.0064	U	0.0091	U	0.0083	U	0.0071	U
Bromochloromethane	74-97-5				NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.42	E	0.0036	U	0.0026	U	0.0036	U	0.0033	U	0.0028	U
2,2-Dichloropropane	594-20-7				NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
1,3-Dichloropropane	142-28-9			500	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
1,1,1,2-Tetrachloroethane	630-20-6			0.1	0.1	mg/kg	0.00045	U	0.00044	U	0.00032	U	0.00045	U	0.00042	U	0.00035	U
Bromobenzene	108-86-1			100	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
n-Butylbenzene	104-51-8				NS	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
sec-Butylbenzene	135-98-8				NS	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
tert-Butylbenzene	98-06-6			100	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
o-Chlorotoluene	95-49-8			100	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
p-Chlorotoluene	106-43-4				NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
1,2-Dibromo-3-chloropropane	96-12-8			10	NS	mg/kg	0.0027	U	0.0027	U	0.0019	U	0.0027	U	0.0025	U	0.0021	U
Hexachlorobutadiene	87-68-3			30	30	mg/kg	0.0036	U	0.0036	U	0.0026	U	0.0036	U	0.0033	U	0.0028	U
Isopropylbenzene	98-82-8			1000	NS	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION								GLX-TPW-305-0.5'		GLX-TPW-205-8'		GLX-TPW-201-5		GLX-TPW-204-4.5'		GLX-TPW-203-4.5'		GLX-TPW-205-3.5'	
SAMPLING DATE								5/24/2019		5/24/2019		5/23/2019		5/24/2019		5/24/2019		5/24/2019	
LAB SAMPLE ID								L1922181-29		L1922181-30		L1922758-01		L1922773-01		L1922773-02		L1922773-03	
SAMPLE TYPE								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																			
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035																			
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
	Naphthalene	91-20-3			4	4	mg/kg	0.0036	U	0.0036	U	0.0026	U	0.0036	U	0.0033	U	0.0028	U
	n-Propylbenzene	103-65-1			100	NS	mg/kg	0.0009	U	0.00089	U	0.00064	U	0.00091	U	0.00083	U	0.00071	U
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
	Diethyl ether	60-29-7			100	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
	Diisopropyl Ether	108-20-3			100	NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg	0.0018	U	0.0018	U	0.0013	U	0.0018	U	0.0017	U	0.0014	U
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg	0.072	U	0.071	U	0.051	U	0.072	U	0.066	U	0.057	U
	Total VOCs		10	4			mg/kg												

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.

Gray shading indicates nondetect detection limit is above one or more of the listed criteria.

Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.

² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-3081-1.5'		GLX-TPW-3091-1.5'		GLX-TPW-3121-1.5'		GLX-TPW-2131-4.5'		GLX-TPW-2132-4.5'		GLX-TPW-2141-3.5'	
SAMPLING DATE							5/31/2019		5/31/2019		5/31/2019		5/31/2019		5/31/2019		5/31/2019	
LAB SAMPLE ID							L1923201-03		L1923201-06		L1923201-09		L1923201-12		L1923201-15		L1923201-18	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																		
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																		
Solids, Total	NONE					%	83		89.2		92		93.2		92.6		93.5	
MCP Volatile Organics by EPA 5035																		
Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0068	U	0.0044	U	0.0047	U	0.0048	U	0.0038	U	0.0047	U
1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
Chloroform	67-66-3			0.2	0.2	mg/kg	0.002	U	0.0013	U	0.0014	U	0.0014	U	0.0011	U	0.0014	U
Carbon tetrachloride	56-23-5			5	5	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
Tetrachloroethene	127-18-4			1	1	mg/kg	0.00068	U	0.003		0.0014		0.00071		0.0033		0.098	
Chlorobenzene	108-90-7			1	1	mg/kg	0.00068	U	0.00044	U	0.00047	U	0.00048	U	0.00038	U	0.00047	U
Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0054	U	0.0036	U	0.0038	U	0.0038	U	0.003	U	0.0037	U
1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00068	U	0.00057		0.00047		0.00048		0.00038		0.0033	
Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00068	U	0.00044	U	0.00047	U	0.00048	U	0.00038	U	0.00047	U
trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00068	U	0.00044	U	0.00047	U	0.00048	U	0.00038	U	0.00047	U
1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00068	U	0.00044	U	0.00047	U	0.00048	U	0.00038	U	0.00047	U
1,1-Dichloropropene	563-58-6			NS	NS	mg/kg	0.00068	U	0.00044	U	0.00047	U	0.00048	U	0.00038	U	0.00047	U
Bromoform	75-25-2			0.1	0.1	mg/kg	0.0054	U	0.0036	U	0.0038	U	0.0038	U	0.003	U	0.0037	U
1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00068	U	0.00044	U	0.00047	U	0.00048	U	0.00038	U	0.00047	U
Benzene	71-43-2			2	2	mg/kg	0.00068	U	0.00044	U	0.00047	U	0.00048	U	0.00038	U	0.00047	U
Toluene	108-88-3			30	30	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.0016		0.00076	U	0.00093	U
Ethylbenzene	100-41-4			40	40	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
Chloromethane	74-87-3			100	NS	mg/kg	0.0054	U	0.0036	U	0.0038	U	0.0038	U	0.003	U	0.0037	U
Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
Chloroethane	75-00-3			100	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.002	U	0.0013	U	0.0014	U	0.0014	U	0.0011	U	0.0014	U
Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00068	U	0.00044	U	0.00047	U	0.00048	U	0.00038	U	0.0089	
1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
p/m-Xylene	179601-23-1			100	100	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
o-Xylene	95-47-6			100	100	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
Xylenes, Total	1330-20-7			100	100	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
1,2-Dichloroethene, Total	540-59-0			NS	NS	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
Dibromomethane	74-95-3			500	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
Styrene	100-42-5			3	3	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.014	U	0.0089	U	0.0094	U	0.0096	U	0.0076	U	0.0093	U
Acetone	67-64-1			6	6	mg/kg	0.066		0.18		0.27		0.064		0.21		0.16	
Carbon disulfide	75-15-0			100	NS	mg/kg	0.014	U	0.0089	U	0.0094	U	0.0096	U	0.0076	U	0.0093	U
Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.014	U	0.0089	U	0.0094	U	0.0096	U	0.0076	U	0.0093	U
Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.014	U	0.0089	U	0.0094	U	0.0096	U	0.0076	U	0.0093	U
2-Hexanone	591-78-6			100	NS	mg/kg	0.014	U	0.0089	U	0.0094	U	0.0096	U	0.0076	U	0.0093	U
Bromochloromethane	74-97-5			NS	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0054	U	0.0036	U	0.0038	U	0.0038	U	0.003	U	0.0037	U
2,2-Dichloropropane	594-20-7			NS	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
1,3-Dichloropropane	142-28-9			500	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
1,1,1,2-Tetrachloroethane	630-20-6			0.1	0.1	mg/kg	0.00068	U	0.00044	U	0.00047	U	0.00048	U	0.00038	U	0.00047	U
Bromobenzene	108-86-1			100	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
n-Butylbenzene	104-51-8			NS	NS	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
sec-Butylbenzene	135-98-8			NS	NS	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
tert-Butylbenzene	98-06-6			100	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
o-Chlorotoluene	95-49-8			100	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
p-Chlorotoluene	106-43-4			NS	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
1,2-Dibromo-3-chloropropane	96-12-8			10	NS	mg/kg	0.004	U	0.0027	U	0.0028	U	0.0029	U	0.0023	U	0.0028	U
Hexachlorobutadiene	87-68-3			30	30	mg/kg	0.0054	U	0.0036	U	0.0038	U	0.0038	U	0.003	U	0.0037	U
Isopropylbenzene	98-82-8			1000	NS	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION								GLX-TPW-3081-1.5'		GLX-TPW-3091-1.5'		GLX-TPW-3121-1.5'		GLX-TPW-2131-4.5'		GLX-TPW-2132-4.5'		GLX-TPW-2141-3.5'	
SAMPLING DATE								5/31/2019		5/31/2019		5/31/2019		5/31/2019		5/31/2019		5/31/2019	
LAB SAMPLE ID								L1923201-03		L1923201-06		L1923201-09		L1923201-12		L1923201-15		L1923201-18	
SAMPLE TYPE								SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																			
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035																			
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
	Naphthalene	91-20-3			4	4	mg/kg	0.0054	U	0.0036	U	0.0038	U	0.0038	U	0.003	U	0.0037	U
	n-Propylbenzene	103-65-1			100	NS	mg/kg	0.0014	U	0.00089	U	0.00094	U	0.00096	U	0.00076	U	0.00093	U
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
	Diethyl ether	60-29-7			100	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
	Diisopropyl Ether	108-20-3			100	NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg	0.0027	U	0.0018	U	0.0019	U	0.0019	U	0.0015	U	0.0019	U
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg	0.11	U	0.071	U	0.075	U	0.077	U	0.061	U	0.075	U
	Total VOCs		10	4			mg/kg												

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.

Gray shading indicates nondetect detection limit is above one or more of the listed criteria.

Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.

² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-2142-3.5'		GLX-TPW-503-4.5'		GLX-TPW-504-5'		GLX-TPW-505-5'	
SAMPLING DATE							5/31/2019		5/31/2019		5/31/2019		5/31/2019	
LAB SAMPLE ID							L1923201-21		L1923201-24		L1923201-27		L1923201-30	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)														
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry														
Solids, Total	NONE					%	92.2		91.4		92.3		90.3	
MCP Volatile Organics by EPA 5035														
Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0054	U	0.0054	U	0.0043	U	0.0038	U
1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
Chloroform	67-66-3			0.2	0.2	mg/kg	0.0016	U	0.0016	U	0.0013	U	0.0012	U
Carbon tetrachloride	56-23-5			5	5	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
Tetrachloroethene	127-18-4			1	1	mg/kg	0.0068		0.0006		0.00043	U	0.00038	U
Chlorobenzene	108-90-7			1	1	mg/kg	0.00054	U	0.00054	U	0.00043	U	0.00038	U
Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0043	U	0.0044	U	0.0034	U	0.0031	U
1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00076		0.00054		0.00043	U	0.00038	U
Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00054	U	0.00054	U	0.00043	U	0.00038	U
trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00054	U	0.00054	U	0.00043	U	0.00038	U
1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00054	U	0.00054	U	0.00043	U	0.00038	U
1,1-Dichloropropene	563-58-6			NS	NS	mg/kg	0.00054	U	0.00054	U	0.00043	U	0.00038	U
Bromoform	75-25-2			0.1	0.1	mg/kg	0.0043	U	0.0044	U	0.0034	U	0.0031	U
1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00054	U	0.00054	U	0.00043	U	0.00038	U
Benzene	71-43-2			2	2	mg/kg	0.00054	U	0.00054	U	0.00043	U	0.00038	U
Toluene	108-88-3			30	30	mg/kg	0.0019		0.0014		0.0012		0.00077	U
Ethylbenzene	100-41-4			40	40	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
Chloromethane	74-87-3			100	NS	mg/kg	0.0043	U	0.0044	U	0.0034	U	0.0031	U
Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
Chloroethane	75-00-3			100	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.0016	U	0.0016	U	0.0013	U	0.0012	U
Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00054	U	0.00054	U	0.00043	U	0.00038	U
1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
p/m-Xylene	179601-23-1			100	100	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
o-Xylene	95-47-6			100	100	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
Xylenes, Total	1330-20-7			100	100	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
Dibromomethane	74-95-3			500	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
Styrene	100-42-5			3	3	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.011	U	0.011	U	0.0086	U	0.0077	U
Acetone	67-64-1			6	6	mg/kg	0.061		0.087		0.042		0.13	
Carbon disulfide	75-15-0			100	NS	mg/kg	0.011	U	0.011	U	0.0086	U	0.0077	U
Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.011	U	0.011	U	0.0086	U	0.0077	U
Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.011	U	0.011	U	0.0086	U	0.0077	U
2-Hexanone	591-78-6			100	NS	mg/kg	0.011	U	0.011	U	0.0086	U	0.0077	U
Bromochloromethane	74-97-5				NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0043	U	0.0044	U	0.0034	U	0.0031	U
2,2-Dichloropropane	594-20-7				NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
1,3-Dichloropropane	142-28-9			500	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
1,1,1,2-Tetrachloroethane	630-20-6			0.1	0.1	mg/kg	0.00054	U	0.00054	U	0.00043	U	0.00038	U
Bromobenzene	108-86-1			100	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
n-Butylbenzene	104-51-8				NS	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
sec-Butylbenzene	135-98-8				NS	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
tert-Butylbenzene	98-06-6			100	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
o-Chlorotoluene	95-49-8			100	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
p-Chlorotoluene	106-43-4				NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
1,2-Dibromo-3-chloropropane	96-12-8			10	NS	mg/kg	0.0032	U	0.0033	U	0.0026	U	0.0023	U
Hexachlorobutadiene	87-68-3			30	30	mg/kg	0.0043	U	0.0044	U	0.0034	U	0.0031	U
Isopropylbenzene	98-82-8			1000	NS	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U

Summary of Phase 1 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION								GLX-TPW-2142-3.5'		GLX-TPW-503-4.5'		GLX-TPW-504-5'		GLX-TPW-505-5'	
SAMPLING DATE								5/31/2019		5/31/2019		5/31/2019		5/31/2019	
LAB SAMPLE ID								L1923201-21		L1923201-24		L1923201-27		L1923201-30	
SAMPLE TYPE								SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)															
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035															
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
	Naphthalene	91-20-3			4	4	mg/kg	0.0043	U	0.0044	U	0.0034	U	0.0031	U
	n-Propylbenzene	103-65-1			100	NS	mg/kg	0.0011	U	0.0011	U	0.00086	U	0.00077	U
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
	Diethyl ether	60-29-7			100	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
	Diisopropyl Ether	108-20-3			100	NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg	0.0022	U	0.0022	U	0.0017	U	0.0015	U
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg	0.087	U	0.087	U	0.069	U	0.062	U
	Total VOCs		10	4			mg/kg								

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.

Gray shading indicates nondetect detection limit is above one or more of the listed criteria.

Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-601-VOC-2 ¹		GLX-TPW-601-VOC-3		GLX-TPW-601-VOC-6		TPW-615-VOC-1		GLX-TPW-615-VOC-4	
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019	
LAB SAMPLE ID							L1949294-28		L1949294-29		L1949294-30		L1949294-31		L1949294-32	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																
Solids, Total	NONE					%	95.1		81.5		90.4		93.1		92.5	
MCP Volatile Organics by EPA 5035																
Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0035	U	0.54	U	0.0038	U	0.0041	U	0.0033	U
1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
Chloroform	67-66-3			0.2	0.2	mg/kg	0.001	U	0.16	U	0.0011	U	0.0012	U	0.00099	U
Carbon tetrachloride	56-23-5			5	5	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
Tetrachloroethene	127-18-4			1	1	mg/kg	0.0012		0.7		0.00038	U	0.00041	U	0.00033	U
Chlorobenzene	108-90-7			1	1	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0028	U	0.43	U	0.003	U	0.0033	U	0.0026	U
1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
1,1-Dichloropropene	563-58-6				NS	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
Bromoform	75-25-2			0.1	0.1	mg/kg	0.0028	U	0.43	U	0.003	U	0.0033	U	0.0026	U
1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
Benzene	71-43-2			2	2	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
Toluene	108-88-3			30	30	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
Ethylbenzene	100-41-4			40	40	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
Chloromethane	74-87-3			100	NS	mg/kg	0.0028	U	0.43	U	0.003	U	0.0033	U	0.0026	U
Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
Chloroethane	75-00-3			100	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.001	U	0.16	U	0.0011	U	0.0012	U	0.00099	U
Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
p/m-Xylene	179601-23-1			100	100	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
o-Xylene	95-47-6			100	100	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
Xylenes, Total	1330-20-7			100	100	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
Dibromomethane	74-95-3			500	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
Styrene	100-42-5			3	3	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.007	U	1.1	U	0.0076	U	0.0082	U	0.0066	U
Acetone	67-64-1			6	6	mg/kg	0.097		1.1	U	0.034		0.02	U	0.016	U
Carbon disulfide	75-15-0			100	NS	mg/kg	0.007	U	1.1	U	0.0076	U	0.0082	U	0.0066	U
Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.007	U	1.1	U	0.0076	U	0.0082	U	0.0066	U
Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.007	U	1.1	U	0.0076	U	0.0082	U	0.0066	U
2-Hexanone	591-78-6			100	NS	mg/kg	0.007	U	1.1	U	0.0076	U	0.0082	U	0.0066	U
Bromochloromethane	74-97-5				NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0028	U	0.43	U	0.003	U	0.0033	U	0.0026	U

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-601-VOC-2 ¹	GLX-TPW-601-VOC-3		GLX-TPW-601-VOC-6		TPW-615-VOC-1		GLX-TPW-615-VOC-4			
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		
LAB SAMPLE ID							L1949294-28		L1949294-29		L1949294-30		L1949294-31		L1949294-32		
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		
SAMPLE DEPTH (ft.)																	
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035						NS											
	2,2-Dichloropropane	594-20-7				NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
	1,3-Dichloropropane	142-28-9			500	0.1	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	1,1,1,2-Tetrachloroethane	630-20-6			0.1	NS	mg/kg	0.00035	U	0.054	U	0.00038	U	0.00041	U	0.00033	U
	Bromobenzene	108-86-1			100	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	n-Butylbenzene	104-51-8				NS	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
	sec-Butylbenzene	135-98-8				NS	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
	tert-Butylbenzene	98-06-6			100	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	o-Chlorotoluene	95-49-8			100	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	p-Chlorotoluene	106-43-4				NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	1,2-Dibromo-3-chloropropane	96-12-8			10	30	mg/kg	0.0021	U	0.33	U	0.0023	U	0.0024	U	0.002	U
	Hexachlorobutadiene	87-68-3			30	NS	mg/kg	0.0028	U	0.43	U	0.003	U	0.0033	U	0.0026	U
	Isopropylbenzene	98-82-8			1000		mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
	Naphthalene	91-20-3			4	4	mg/kg	0.0028	U	0.43	U	0.003	U	0.0033	U	0.0026	U
	n-Propylbenzene	103-65-1			100	NS	mg/kg	0.0007	U	0.11	U	0.00076	U	0.00082	U	0.00066	U
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	Diethyl ether	60-29-7			100	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	Diisopropyl Ether	108-20-3			100	NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg	0.0014	U	0.22	U	0.0015	U	0.0016	U	0.0013	U
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg	0.056	U	8.7	U	0.061	U	0.065	U	0.053	U

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria.
Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-615-VOC-7		GLX-TPW-615-VOC-10		GLX-TPW-615-VOC-13		GLX-TPW-602-VOC-2		GLX-TPW-602-VOC-4.5		GLX-TPW-602-VOC-6.5		
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		
LAB SAMPLE ID							L1949294-33		L1949294-34		L1949294-35		L1949294-36		L1949294-37		L1949294-38		
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
SAMPLE DEPTH (ft.)																			
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																			
	Solids, Total	NONE					%	96		93.4		90.2		91.7		93.4		84.8	
MCP Volatile Organics by EPA 5035																			
	Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0036	U	0.0037	U	0.0034	U	0.28	U	2.4	U	0.005	U
	1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	Chloroform	67-66-3			0.2	0.2	mg/kg	0.0011	U	0.0011	U	0.001	U	0.084	U	0.71	U	0.0015	U
	Carbon tetrachloride	56-23-5			5	5	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	Tetrachloroethene	127-18-4			1	1	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U	0.0005	U
	Chlorobenzene	108-90-7			1	1	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U	0.0005	U
	Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0028	U	0.003	U	0.0027	U	0.22	U	1.9	U	0.004	U
	1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U	0.0005	U
	Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U	0.0005	U
	trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U	0.0005	U
	1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U	0.0005	U
	1,1-Dichloropropene	563-58-6				NS	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U	0.0005	U
	Bromoform	75-25-2			0.1	0.1	mg/kg	0.0028	U	0.003	U	0.0027	U	0.22	U	1.9	U	0.004	U
	1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U	0.0005	U
	Benzene	71-43-2			2	2	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.044		0.24	U	0.0005	U
	Toluene	108-88-3			30	30	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.11		0.47	U	0.001	U
	Ethylbenzene	100-41-4			40	40	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	Chloromethane	74-87-3			100	NS	mg/kg	0.0028	U	0.003	U	0.0027	U	0.22	U	1.9	U	0.004	U
	Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	Chloroethane	75-00-3			100	NS	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.0011	U	0.0011	U	0.001	U	0.084	U	0.71	U	0.0015	U
	Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U	0.0005	U
	1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	p/m-Xylene	179601-23-1			100	100	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	o-Xylene	95-47-6			100	100	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.078		0.47	U	0.001	U
	Xylenes, Total	1330-20-7			100	100	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.078		0.47	U	0.001	U
	cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	Dibromomethane	74-95-3			500	NS	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	Styrene	100-42-5			3	3	mg/kg	0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U	0.001	U
	Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.0071	U	0.0075	U	0.0067	U	0.56	U	4.7	U	0.01	U
	Acetone	67-64-1			6	6	mg/kg	0.036		0.062		0.021		0.56	U	4.7	U	0.11	
	Carbon disulfide	75-15-0			100	NS	mg/kg	0.0071	U	0.0075	U	0.0067	U	0.56	U	4.7	U	0.01	U
	Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.0071	U	0.0075	U	0.0067	U	0.56	U	4.7	U	0.01	U
	Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.0071	U	0.0075	U	0.0067	U	0.56	U	4.7	U	0.01	U
	2-Hexanone	591-78-6			100	NS	mg/kg	0.0071	U	0.0075	U	0.0067	U	0.56	U	4.7	U	0.01	U
	Bromochloromethane	74-97-5				NS	mg/kg	0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U	0.002	U
	Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0028	U	0.003	U	0.0027	U	0.22	U	1.9	U	0.004	U

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-615-VOC-7		GLX-TPW-615-VOC-10		GLX-TPW-615-VOC-13		GLX-TPW-602-VOC-2		GLX-TPW-602-VOC-4.5		GLX-TPW-602-VOC-6.5	
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019	
LAB SAMPLE ID							L1949294-33		L1949294-34		L1949294-35		L1949294-36		L1949294-37		L1949294-38	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																		
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035							NS											
	2,2-Dichloropropane	594-20-7				NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg		0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U
	1,3-Dichloropropane	142-28-9			500	0.1	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	1,1,1,2-Tetrachloroethane	630-20-6			0.1	NS	mg/kg		0.00036	U	0.00037	U	0.00034	U	0.028	U	0.24	U
	Bromobenzene	108-86-1			100	NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	n-Butylbenzene	104-51-8				NS	mg/kg		0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U
	sec-Butylbenzene	135-98-8				NS	mg/kg		0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U
	tert-Butylbenzene	98-06-6			100	NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	o-Chlorotoluene	95-49-8			100	NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	p-Chlorotoluene	106-43-4				NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	1,2-Dibromo-3-chloropropane	96-12-8			10	30	mg/kg		0.0021	U	0.0022	U	0.002	U	0.17	U	1.4	U
	Hexachlorobutadiene	87-68-3			30	NS	mg/kg		0.0028	U	0.003	U	0.0027	U	0.22	U	1.9	U
	Isopropylbenzene	98-82-8			1000		mg/kg		0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg		0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U
	Naphthalene	91-20-3			4	4	mg/kg		0.0028	U	0.003	U	0.0027	U	1		93	U
	n-Propylbenzene	103-65-1			100	NS	mg/kg		0.00071	U	0.00075	U	0.00067	U	0.056	U	0.47	U
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	1.2	U
	Diethyl ether	60-29-7			100	NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	Diisopropyl Ether	108-20-3			100	NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg		0.0014	U	0.0015	U	0.0013	U	0.11	U	0.94	U
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg		0.057	U	0.06	U	0.054	U	4.5	U	38	U

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria.
Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

- U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- ¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
- ² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-603-VOC-1.5		GLX-TPW-603-VOC-3		GLX-TPW-604-VOC-1		GLX-TPW-604-VOC-3		GLX-TPW-605-VOC-1		GLX-TPW-605-VOC-3		
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		
LAB SAMPLE ID							L1949294-39		L1949294-40		L1949294-41		L1949294-42		L1949294-43		L1949294-44		
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
SAMPLE DEPTH (ft.)																			
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual		
General Chemistry																			
	Solids, Total	NONE					%	96.2		95.7		96.3		90.9		92.7		88.2	
MCP Volatile Organics by EPA 5035																			
	Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0033	U	0.0033	U	0.0034	U	0.0045	U	0.0041	U	0.0047	U
	1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Chloroform	67-66-3			0.2	0.2	mg/kg	0.001	U	0.00098	U	0.001	U	0.0013	U	0.0012	U	0.0014	U
	Carbon tetrachloride	56-23-5			5	5	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Tetrachloroethene	127-18-4			1	1	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	Chlorobenzene	108-90-7			1	1	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0027	U	0.0026	U	0.0027	U	0.0036	U	0.0032	U	0.0038	U
	1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	1,1-Dichloropropene	563-58-6				NS	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	Bromoform	75-25-2			0.1	0.1	mg/kg	0.0027	U	0.0026	U	0.0027	U	0.0036	U	0.0032	U	0.0038	U
	1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	Benzene	71-43-2			2	2	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00061		0.00041	U	0.00047	U
	Toluene	108-88-3			30	30	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Ethylbenzene	100-41-4			40	40	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Chloromethane	74-87-3			100	NS	mg/kg	0.0027	U	0.0026	U	0.0027	U	0.0036	U	0.0032	U	0.0038	U
	Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Chloroethane	75-00-3			100	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.001	U	0.00098	U	0.001	U	0.0013	U	0.0012	U	0.0014	U
	Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	p/m-Xylene	179601-23-1			100	100	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	o-Xylene	95-47-6			100	100	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Xylenes, Total	1330-20-7			100	100	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Dibromomethane	74-95-3			500	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	Styrene	100-42-5			3	3	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.0066	U	0.0065	U	0.0068	U	0.0089	U	0.0081	U	0.0094	U
	Acetone	67-64-1			6	6	mg/kg	0.022		0.027		0.049		0.041		0.034		0.092	
	Carbon disulfide	75-15-0			100	NS	mg/kg	0.0066	U	0.0065	U	0.0068	U	0.0089	U	0.0081	U	0.0094	U
	Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.0066	U	0.0065	U	0.0068	U	0.0089	U	0.0081	U	0.0094	U
	Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.0066	U	0.0065	U	0.0068	U	0.0089	U	0.0081	U	0.0094	U
	2-Hexanone	591-78-6			100	NS	mg/kg	0.0066	U	0.0065	U	0.0068	U	0.0089	U	0.0081	U	0.0094	U
	Bromochloromethane	74-97-5				NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0027	U	0.0026	U	0.0027	U	0.0036	U	0.0032	U	0.0038	U

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-603-VOC-1.5		GLX-TPW-603-VOC-3		GLX-TPW-604-VOC-1		GLX-TPW-604-VOC-3		GLX-TPW-605-VOC-1		GLX-TPW-605-VOC-3	
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019	
LAB SAMPLE ID							L1949294-39		L1949294-40		L1949294-41		L1949294-42		L1949294-43		L1949294-44	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																		
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035						NS												
	2,2-Dichloropropane	594-20-7			NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,2-Dibromoethane	106-93-4		0.1	NS	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	1,3-Dichloropropane	142-28-9		500	0.1	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,1,1,2-Tetrachloroethane	630-20-6		0.1	NS	mg/kg	0.00033	U	0.00033	U	0.00034	U	0.00045	U	0.00041	U	0.00047	U
	Bromobenzene	108-86-1		100	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	n-Butylbenzene	104-51-8			NS	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	sec-Butylbenzene	135-98-8			NS	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	tert-Butylbenzene	98-06-6		100	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	o-Chlorotoluene	95-49-8		100	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	p-Chlorotoluene	106-43-4			NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,2-Dibromo-3-chloropropane	96-12-8		10	30	mg/kg	0.002	U	0.002	U	0.002	U	0.0027	U	0.0024	U	0.0028	U
	Hexachlorobutadiene	87-68-3		30	NS	mg/kg	0.0027	U	0.0026	U	0.0027	U	0.0036	U	0.0032	U	0.0038	U
	Isopropylbenzene	98-82-8		1000		mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	p-Isopropyltoluene	99-87-6		100	NS	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	Naphthalene	91-20-3		4	4	mg/kg	0.0027	U	0.0026	U	0.0027	U	0.0036	U	0.0032	U	0.0038	U
	n-Propylbenzene	103-65-1		100	NS	mg/kg	0.00066	U	0.00065	U	0.00068	U	0.00089	U	0.00081	U	0.00094	U
	1,2,3-Trichlorobenzene	87-61-6			NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,2,4-Trichlorobenzene	120-82-1		2	2	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,3,5-Trimethylbenzene	108-67-8		10	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,2,4-Trimethylbenzene	95-63-6		1000	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	Diethyl ether	60-29-7		100	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	Diisopropyl Ether	108-20-3		100	NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	Ethyl-Tert-Butyl-Ether	637-92-3			NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	Tertiary-Amyl Methyl Ether	994-05-8			NS	mg/kg	0.0013	U	0.0013	U	0.0014	U	0.0018	U	0.0016	U	0.0019	U
	1,4-Dioxane	123-91-1		0.2	0.2	mg/kg	0.053	U	0.052	U	0.054	U	0.072	U	0.065	U	0.075	U

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria.
Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							DUPA		GLX-TPW-605-VOC-8		GLX-TPW-607-VOC-.6		GLX-TPW-607-VOC-4.6		GLX-TPW-611-VOC-1.5		GLX-TPW-611-VOC-4		
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		
LAB SAMPLE ID							L1949294-45		L1949294-46		L1949294-47		L1949294-48		L1949294-49		L1949294-50		
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
SAMPLE DEPTH (ft.)																			
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																			
	Solids, Total	NONE					%	88.4		87.1		93.3		90.9		85		93.8	
MCP Volatile Organics by EPA 5035																			
	Methylene chloride	75-09-2			0.1	NS	mg/kg	0.005	U	0.0036	U	0.0038	U	0.0039	U	0.0049	U	0.0037	U
	1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	Chloroform	67-66-3			0.2	0.2	mg/kg	0.0015	U	0.0011	U	0.0011	U	0.0012	U	0.0015	U	0.0011	U
	Carbon tetrachloride	56-23-5			5	5	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	Tetrachloroethene	127-18-4			1	1	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	Chlorobenzene	108-90-7			1	1	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.004	U	0.0029	U	0.003	U	0.0031	U	0.0039	U	0.003	U
	1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	1,1-Dichloropropene	563-58-6				NS	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	Bromoform	75-25-2			0.1	0.1	mg/kg	0.004	U	0.0029	U	0.003	U	0.0031	U	0.0039	U	0.003	U
	1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	Benzene	71-43-2			2	2	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	Toluene	108-88-3			30	30	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	Ethylbenzene	100-41-4			40	40	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	Chloromethane	74-87-3			100	NS	mg/kg	0.004	U	0.0029	U	0.003	U	0.0031	U	0.0039	U	0.003	U
	Bromomethane	74-83-9			0.5	0.5	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	Chloroethane	75-00-3			100	NS	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.0015	U	0.0011	U	0.0011	U	0.0012	U	0.0015	U	0.0011	U
	Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U	0.00037	U
	1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	p/m-Xylene	179601-23-1			100	100	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	o-Xylene	95-47-6			100	100	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	Xylenes, Total	1330-20-7			100	100	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	Dibromomethane	74-95-3			500	NS	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	Styrene	100-42-5			3	3	mg/kg	0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U	0.00074	U
	Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.01	U	0.0072	U	0.0075	U	0.0078	U	0.0098	U	0.0074	U
	Acetone	67-64-1			6	6	mg/kg	0.061		0.018	U	0.066		0.03		0.091		0.028	
	Carbon disulfide	75-15-0			100	NS	mg/kg	0.01	U	0.0072	U	0.0075	U	0.0078	U	0.0098	U	0.0074	U
	Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.01	U	0.0072	U	0.0075	U	0.0078	U	0.0098	U	0.0074	U
	Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.01	U	0.0072	U	0.0075	U	0.0078	U	0.0098	U	0.0074	U
	2-Hexanone	591-78-6			100	NS	mg/kg	0.01	U	0.0072	U	0.0075	U	0.0078	U	0.0098	U	0.0074	U
	Bromochloromethane	74-97-5				NS	mg/kg	0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U	0.0015	U
	Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.004	U	0.0029	U	0.003	U	0.0031	U	0.0039		0.003	U

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							DUPA		GLX-TPW-605-VOC-8		GLX-TPW-607-VOC-.6		GLX-TPW-607-VOC-4.6		GLX-TPW-611-VOC-1.5		GLX-TPW-611-VOC-4	
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019	
LAB SAMPLE ID							L1949294-45		L1949294-46		L1949294-47		L1949294-48		L1949294-49		L1949294-50	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																		
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units		Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035							NS											
	2,2-Dichloropropane	594-20-7				NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg		0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U
	1,3-Dichloropropane	142-28-9			500	0.1	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	1,1,1,2-Tetrachloroethane	630-20-6			0.1	NS	mg/kg		0.0005	U	0.00036	U	0.00038	U	0.00039	U	0.00049	U
	Bromobenzene	108-86-1			100	NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	n-Butylbenzene	104-51-8				NS	mg/kg		0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U
	sec-Butylbenzene	135-98-8				NS	mg/kg		0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U
	tert-Butylbenzene	98-06-6			100	NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	o-Chlorotoluene	95-49-8			100	NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	p-Chlorotoluene	106-43-4				NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	1,2-Dibromo-3-chloropropane	96-12-8			10	30	mg/kg		0.003	U	0.0022	U	0.0022	U	0.0024	U	0.0029	U
	Hexachlorobutadiene	87-68-3			30	NS	mg/kg		0.004	U	0.0029	U	0.003	U	0.0031	U	0.0039	U
	Isopropylbenzene	98-82-8			1000		mg/kg		0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg		0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U
	Naphthalene	91-20-3			4	4	mg/kg		0.004	U	0.0029	U	0.003	U	0.0031	U	0.0039	U
	n-Propylbenzene	103-65-1			100	NS	mg/kg		0.001	U	0.00072	U	0.00075	U	0.00078	U	0.00098	U
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	Diethyl ether	60-29-7			100	NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	Diisopropyl Ether	108-20-3			100	NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg		0.002	U	0.0014	U	0.0015	U	0.0016	U	0.002	U
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg		0.08	U	0.057	U	0.06	U	0.063	U	0.078	U

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria.
Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-612-VOC-1.5		GLX-TPW-612-VOC-4		GLX-TPW-613-VOC-1.5		GLX-TPW-613-VOC-4		GLX-TPW-614-VOC-1		GLX-TPW-614-VOC-4		
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		
LAB SAMPLE ID							L1949294-51		L1949294-52		L1949294-53		L1949294-54		L1949294-55		L1949294-56		
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
SAMPLE DEPTH (ft.)																			
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																			
Solids, Total		NONE					%	94.2		92.6		93.4		92.5		92.5		93.8	
MCP Volatile Organics by EPA 5035																			
	Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0042	U	0.0038	U	0.0034	U	0.0049	U	0.0043	U	0.0035	U
	1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Chloroform	67-66-3			0.2	0.2	mg/kg	0.0013	U	0.0011	U	0.001	U	0.0015	U	0.0013	U	0.001	U
	Carbon tetrachloride	56-23-5			5	5	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Tetrachloroethene	127-18-4			1	1	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	Chlorobenzene	108-90-7			1	1	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0034	U	0.003	U	0.0027	U	0.0039	U	0.0034	U	0.0028	U
	1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	1,1-Dichloropropene	563-58-6				NS	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	Bromoform	75-25-2			0.1	0.1	mg/kg	0.0034	U	0.003	U	0.0027	U	0.0039	U	0.0034	U	0.0028	U
	1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	Benzene	71-43-2			2	2	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	Toluene	108-88-3			30	30	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Ethylbenzene	100-41-4			40	40	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Chloromethane	74-87-3			100	NS	mg/kg	0.0034	U	0.003	U	0.0027	U	0.0039	U	0.0034	U	0.0028	U
	Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Chloroethane	75-00-3			100	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.0013	U	0.0011	U	0.001	U	0.0015	U	0.0013	U	0.001	U
	Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	p/m-Xylene	179601-23-1			100	100	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	o-Xylene	95-47-6			100	100	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Xylenes, Total	1330-20-7			100	100	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Dibromomethane	74-95-3			500	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	Styrene	100-42-5			3	3	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.0084	U	0.0076	U	0.0068	U	0.0098	U	0.0085	U	0.007	U
	Acetone	67-64-1			6	6	mg/kg	0.08		0.059		0.028		0.032		0.066		0.017	U
	Carbon disulfide	75-15-0			100	NS	mg/kg	0.0084	U	0.0076	U	0.0068	U	0.0098	U	0.0085	U	0.007	U
	Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.0084	U	0.0076	U	0.0068	U	0.0098	U	0.0085	U	0.007	U
	Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.0084	U	0.0076	U	0.0068	U	0.0098	U	0.0085	U	0.007	U
	2-Hexanone	591-78-6			100	NS	mg/kg	0.0084	U	0.0076	U	0.0068	U	0.0098	U	0.0085	U	0.007	U
	Bromochloromethane	74-97-5				NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0034	U	0.003	U	0.0027	U	0.0039	U	0.0034	U	0.0028	U

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-612-VOC-1.5		GLX-TPW-612-VOC-4		GLX-TPW-613-VOC-1.5		GLX-TPW-613-VOC-4		GLX-TPW-614-VOC-1		GLX-TPW-614-VOC-4	
SAMPLING DATE							10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019	
LAB SAMPLE ID							L1949294-51		L1949294-52		L1949294-53		L1949294-54		L1949294-55		L1949294-56	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																		
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035							NS											
	2,2-Dichloropropane	594-20-7			NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,2-Dibromoethane	106-93-4		0.1	NS	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	1,3-Dichloropropane	142-28-9		500	0.1	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,1,1,2-Tetrachloroethane	630-20-6		0.1	NS	mg/kg	0.00042	U	0.00038	U	0.00034	U	0.00049	U	0.00043	U	0.00035	U
	Bromobenzene	108-86-1		100	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	n-Butylbenzene	104-51-8			NS	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	sec-Butylbenzene	135-98-8			NS	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	tert-Butylbenzene	98-06-6		100	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	o-Chlorotoluene	95-49-8		100	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	p-Chlorotoluene	106-43-4			NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,2-Dibromo-3-chloropropane	96-12-8		10	30	mg/kg	0.0025	U	0.0023	U	0.002	U	0.0029	U	0.0026	U	0.0021	U
	Hexachlorobutadiene	87-68-3		30	NS	mg/kg	0.0034	U	0.003	U	0.0027	U	0.0039	U	0.0034	U	0.0028	U
	Isopropylbenzene	98-82-8		1000		mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	p-Isopropyltoluene	99-87-6		100	NS	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	Naphthalene	91-20-3		4	4	mg/kg	0.0034	U	0.003	U	0.0027	U	0.0039	U	0.0034	U	0.0028	U
	n-Propylbenzene	103-65-1		100	NS	mg/kg	0.00084	U	0.00076	U	0.00068	U	0.00098	U	0.00085	U	0.0007	U
	1,2,3-Trichlorobenzene	87-61-6			NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,2,4-Trichlorobenzene	120-82-1		2	2	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,3,5-Trimethylbenzene	108-67-8		10	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,2,4-Trimethylbenzene	95-63-6		1000	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	Diethyl ether	60-29-7		100	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	Diisopropyl Ether	108-20-3		100	NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	Ethyl-Tert-Butyl-Ether	637-92-3			NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	Tertiary-Amyl Methyl Ether	994-05-8			NS	mg/kg	0.0017	U	0.0015	U	0.0014	U	0.002	U	0.0017	U	0.0014	U
	1,4-Dioxane	123-91-1		0.2	0.2	mg/kg	0.067	U	0.06	U	0.054	U	0.078	U	0.068	U	0.056	U

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria.
Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							DUPB		GLX-TPW-606 (1)		GLX-TPW-606 (4)		GLX-TPW-608 (1)		GLX-TPW-608 (4)		GLX-TPW-609 (1) ¹		
SAMPLING DATE							10/20/2019		11/2/2019		11/2/2019		11/2/2019		11/2/2019		11/2/2019		
LAB SAMPLE ID							L1949294-57		L1952035-02		L1952035-04		L1952035-06		L1952035-08		L1952035-10		
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
SAMPLE DEPTH (ft.)																			
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	
General Chemistry																			
	Solids, Total	NONE				%	92.7		84.8		90.1		88		86.1		92.6		
MCP Volatile Organics by EPA 5035																			
	Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0039	U	0.004	U	0.0024	U	0.0035	U	0.0047	U	0.0034	U
	1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	Chloroform	67-66-3			0.2	0.2	mg/kg	0.0012	U	0.0012	U	0.00072	U	0.0011	U	0.0014	U	0.001	U
	Carbon tetrachloride	56-23-5			5	5	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	Tetrachloroethene	127-18-4			1	1	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	Chlorobenzene	108-90-7			1	1	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0031	U	0.0032	U	0.0019	U	0.0028	U	0.0037	U	0.0027	U
	1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	1,1-Dichloropropene	563-58-6				NS	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	Bromoform	75-25-2			0.1	0.1	mg/kg	0.0031	U	0.0032	U	0.0019	U	0.0028	U	0.0037	U	0.0027	U
	1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	Benzene	71-43-2			2	2	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	Toluene	108-88-3			30	30	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	Ethylbenzene	100-41-4			40	40	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	Chloromethane	74-87-3			100	NS	mg/kg	0.0031	U	0.0032	U	0.0019	U	0.0028	U	0.0037	U	0.0027	U
	Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	Chloroethane	75-00-3			100	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.0012	U	0.0012	U	0.00072	U	0.0011	U	0.0014	U	0.001	U
	Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U	0.00034	U
	1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	p/m-Xylene	179601-23-1			100	100	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	o-Xylene	95-47-6			100	100	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	Xylenes, Total	1330-20-7			100	100	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	Dibromomethane	74-95-3			500	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	Styrene	100-42-5			3	3	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U	0.00069	U
	Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.0078	U	0.008	U	0.0048	U	0.0071	U	0.0094	U	0.0069	U
	Acetone	67-64-1			6	6	mg/kg	0.052		0.043		0.016		0.02		0.053		0.07	
	Carbon disulfide	75-15-0			100	NS	mg/kg	0.0078	U	0.008	U	0.0048	U	0.0071	U	0.0094	U	0.0069	U
	Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.0078	U	0.008	U	0.0048	U	0.0071	U	0.0094	U	0.0069	U
	Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.0078	U	0.008	U	0.0048	U	0.0071	U	0.0094	U	0.0069	U
	2-Hexanone	591-78-6			100	NS	mg/kg	0.0078	U	0.008	U	0.0048	U	0.0071	U	0.0094	U	0.0069	U
	Bromochloromethane	74-97-5				NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U	0.0014	U
	Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0031	U	0.0032	U	0.0019	U	0.0028	U	0.0037	U	0.0027	U

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION						DUPB		GLX-TPW-606 (1)		GLX-TPW-606 (4)		GLX-TPW-608 (1)		GLX-TPW-608 (4)		GLX-TPW-609 (1) ¹	
SAMPLING DATE						10/20/2019		11/2/2019		11/2/2019		11/2/2019		11/2/2019		11/2/2019	
LAB SAMPLE ID						L1949294-57		L1952035-02		L1952035-04		L1952035-06		L1952035-08		L1952035-10	
SAMPLE TYPE						SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																	
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035						NS											
	2,2-Dichloropropane	594-20-7				NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U
	1,3-Dichloropropane	142-28-9			500	0.1	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	1,1,1,2-Tetrachloroethane	630-20-6			0.1	NS	mg/kg	0.00039	U	0.0004	U	0.00024	U	0.00035	U	0.00047	U
	Bromobenzene	108-86-1			100	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	n-Butylbenzene	104-51-8				NS	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U
	sec-Butylbenzene	135-98-8				NS	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U
	tert-Butylbenzene	98-06-6			100	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	o-Chlorotoluene	95-49-8			100	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	p-Chlorotoluene	106-43-4				NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	1,2-Dibromo-3-chloropropane	96-12-8			10	30	mg/kg	0.0023	U	0.0024	U	0.0014	U	0.0021	U	0.0028	U
	Hexachlorobutadiene	87-68-3			30	NS	mg/kg	0.0031	U	0.0032	U	0.0019	U	0.0028	U	0.0037	U
	Isopropylbenzene	98-82-8			1000		mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U
	Naphthalene	91-20-3			4	4	mg/kg	0.0031	U	0.0032	U	0.0019	U	0.0028	U	0.0037	U
	n-Propylbenzene	103-65-1			100	NS	mg/kg	0.00078	U	0.0008	U	0.00048	U	0.00071	U	0.00094	U
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	Diethyl ether	60-29-7			100	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	Diisopropyl Ether	108-20-3			100	NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg	0.0016	U	0.0016	U	0.00096	U	0.0014	U	0.0019	U
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg	0.062	U	0.064	U	0.038	U	0.057	U	0.075	U

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria.
Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-609 (4)		GLX-TPW-610 (1) ¹		GLX-TPW-610 (3)		GLX-TPW-610 (7)		GLC-C14(A)-DC-VOC (10)		GLC-C14(B)-DC-VOC (12) ¹		
SAMPLING DATE							11/2/2019		11/2/2019		11/2/2019		11/2/2019		11/2/2019		11/2/2019		
LAB SAMPLE ID							L1952035-12		L1952035-14		L1952035-16		L1952035-18		L1952035-20		L1952035-23		
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
SAMPLE DEPTH (ft.)																			
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual		
General Chemistry																			
	Solids, Total	NONE					%	92.7		91.4		96		94.4		80.7		91.2	
MCP Volatile Organics by EPA 5035																			
	Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0032	U	0.0038	U	0.0024	U	0.003	U	0.0037	U	0.0026	U
	1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	Chloroform	67-66-3			0.2	0.2	mg/kg	0.00096	U	0.0011	U	0.00071	U	0.00091	U	0.0011	U	0.00078	U
	Carbon tetrachloride	56-23-5			5	5	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	Tetrachloroethene	127-18-4			1	1	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	Chlorobenzene	108-90-7			1	1	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0026	U	0.003	U	0.0019	U	0.0024	U	0.003	U	0.0021	U
	1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	1,1-Dichloropropene	563-58-6				NS	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	Bromoform	75-25-2			0.1	0.1	mg/kg	0.0026	U	0.003	U	0.0019	U	0.0024	U	0.003	U	0.0021	U
	1,1,2,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	Benzene	71-43-2			2	2	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	Toluene	108-88-3			30	30	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	Ethylbenzene	100-41-4			40	40	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	Chloromethane	74-87-3			100	NS	mg/kg	0.0026	U	0.003	U	0.0019	U	0.0024	U	0.003	U	0.0021	U
	Bromomethane	74-83-9			0.5	0.5	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	Chloroethane	75-00-3			100	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.00096	U	0.0011	U	0.00071	U	0.00091	U	0.0011	U	0.00078	U
	Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U
	1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	p/m-Xylene	179601-23-1			100	100	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	o-Xylene	95-47-6			100	100	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	Xylenes, Total	1330-20-7			100	100	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	Dibromomethane	74-95-3			500	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	Styrene	100-42-5			3	3	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U
	Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.0064	U	0.0076	U	0.0048	U	0.0061	U	0.0074	U	0.0052	U
	Acetone	67-64-1			6	6	mg/kg	0.092		0.18		0.018		0.035		0.018	U	0.013	U
	Carbon disulfide	75-15-0			100	NS	mg/kg	0.0064	U	0.0076	U	0.0048	U	0.0061	U	0.0074	U	0.0052	U
	Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.0064	U	0.018		0.0048	U	0.0061	U	0.0074	U	0.0052	U
	Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.0064	U	0.0076	U	0.0048	U	0.0061	U	0.0074	U	0.0052	U
	2-Hexanone	591-78-6			100	NS	mg/kg	0.0064	U	0.0076	U	0.0048	U	0.0061	U	0.0074	U	0.0052	U
	Bromochloromethane	74-97-5				NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U
	Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0026	U	0.003	U	0.0019	U	0.0024	U	0.003	U	0.0021	U

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLX-TPW-609 (4)		GLX-TPW-610 (1) ¹		GLX-TPW-610 (3)		GLX-TPW-610 (7)		GLC-C14(A)-DC-VOC (10)		GLC-C14(B)-DC-VOC (12) ¹			
SAMPLING DATE							11/2/2019		11/2/2019		11/2/2019		11/2/2019		11/2/2019		11/2/2019			
LAB SAMPLE ID							L1952035-12		L1952035-14		L1952035-16		L1952035-18		L1952035-20		L1952035-23			
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL		SOIL			
SAMPLE DEPTH (ft.)																				
		CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	
MCP Volatile Organics by EPA 5035						NS														
	2,2-Dichloropropane	594-20-7				NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	1,2-Dibromoethane	106-93-4			0.1	NS	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U	
	1,3-Dichloropropane	142-28-9			500	0.1	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	1,1,1,2-Tetrachloroethane	630-20-6			0.1	NS	mg/kg	0.00032	U	0.00038	U	0.00024	U	0.0003	U	0.00037	U	0.00026	U	
	Bromobenzene	108-86-1			100	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	n-Butylbenzene	104-51-8				NS	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U	
	sec-Butylbenzene	135-98-8				NS	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U	
	tert-Butylbenzene	98-06-6			100	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	o-Chlorotoluene	95-49-8			100	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	p-Chlorotoluene	106-43-4				NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	1,2-Dibromo-3-chloropropane	96-12-8			10	30	mg/kg	0.0019	U	0.0023	U	0.0014	U	0.0018	U	0.0022	U	0.0016	U	
	Hexachlorobutadiene	87-68-3			30	NS	mg/kg	0.0026	U	0.003	U	0.0019	U	0.0024	U	0.003	U	0.0021	U	
	Isopropylbenzene	98-82-8			1000		mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U	
	p-Isopropyltoluene	99-87-6			100	NS	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U	
	Naphthalene	91-20-3			4	4	mg/kg	0.0026	U	0.003	U	0.0019	U	0.0024	U	0.003	U	0.0021	U	
	n-Propylbenzene	103-65-1			100	NS	mg/kg	0.00064	U	0.00076	U	0.00048	U	0.00061	U	0.00074	U	0.00052	U	
	1,2,3-Trichlorobenzene	87-61-6				NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	1,2,4-Trichlorobenzene	120-82-1			2	2	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	1,3,5-Trimethylbenzene	108-67-8			10	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	1,2,4-Trimethylbenzene	95-63-6			1000	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	Diethyl ether	60-29-7			100	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	Diisopropyl Ether	108-20-3			100	NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	Ethyl-Tert-Butyl-Ether	637-92-3				NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	Tertiary-Amyl Methyl Ether	994-05-8				NS	mg/kg	0.0013	U	0.0015	U	0.00095	U	0.0012	U	0.0015	U	0.001	U	
	1,4-Dioxane	123-91-1			0.2	0.2	mg/kg	0.051	U	0.061	U	0.038	U	0.049	U	0.059	U	0.042	U	

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria.
Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLC-C13(A)-DC-VOC (9) ¹		GLC-C13(B)-DC-VOC (9) ²		GLX-TPW-403-VOC (3')		GLX-TPW-401-VOC (3')		GLX-TPW-402-VOC (4')	
SAMPLING DATE							11/2/2019		11/2/2019		11/6/2019		11/6/2019		11/6/2019	
LAB SAMPLE ID							L1952035-25		L1952035-27		L1952792-04		L1952792-05		L1952792-06	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry																
Solids, Total	NONE					%	82.9		86.6		88.1		90.6		84.9	
MCP Volatile Organics by EPA 5035																
Methylene chloride	75-09-2			0.1	NS	mg/kg	0.0051	U	0.3	U	0.0089	U	0.33	U	0.3	U
1,1-Dichloroethane	75-34-3			0.4	0.4	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
Chloroform	67-66-3			0.2	0.2	mg/kg	0.0015	U	0.091	U	0.0027	U	0.098	U	0.09	U
Carbon tetrachloride	56-23-5			5	5	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
1,2-Dichloropropane	78-87-5			0.1	0.1	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
Dibromochloromethane	124-48-1			0.005	0.005	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
1,1,2-Trichloroethane	79-00-5			0.1	0.1	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
Tetrachloroethene	127-18-4			1	1	mg/kg	0.00051	U	0.03	U	0.00089	U	0.041		2	
Chlorobenzene	108-90-7			1	1	mg/kg	0.00051	U	0.03	U	0.00089	U	0.033	U	0.03	U
Trichlorofluoromethane	75-69-4			1000	NS	mg/kg	0.0041	U	0.24	U	0.0071	U	0.26	U	0.24	U
1,2-Dichloroethane	107-06-2			0.1	0.1	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
1,1,1-Trichloroethane	71-55-6			30	30	mg/kg	0.00051	U	0.03	U	0.00089	U	0.033	U	0.03	U
Bromodichloromethane	75-27-4			0.1	0.1	mg/kg	0.00051	U	0.03	U	0.00089	U	0.033	U	0.03	U
trans-1,3-Dichloropropene	10061-02-6			0.01	NS	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
cis-1,3-Dichloropropene	10061-01-5			0.01	NS	mg/kg	0.00051	U	0.03	U	0.00089	U	0.033	U	0.03	U
1,3-Dichloropropene, Total	542-75-6			0.01	0.01	mg/kg	0.00051	U	0.03	U	0.00089	U	0.033	U	0.03	U
1,1-Dichloropropene	563-58-6				NS	mg/kg	0.00051	U	0.03	U	0.00089	U	0.033	U	0.03	U
Bromoform	75-25-2			0.1	0.1	mg/kg	0.0041	U	0.24	U	0.0071	U	0.26	U	0.24	U
1,1,1,2-Tetrachloroethane	79-34-5			0.005	0.005	mg/kg	0.00051	U	0.03	U	0.00089	U	0.033	U	0.03	U
Benzene	71-43-2			2	2	mg/kg	0.00051	U	0.03	U	0.00089	U	0.033	U	0.03	U
Toluene	108-88-3			30	30	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
Ethylbenzene	100-41-4			40	40	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
Chloromethane	74-87-3			100	NS	mg/kg	0.0041	U	0.24	U	0.0071	U	0.26	U	0.24	U
Bromomethane	74-83-9			0.5	0.5	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
Vinyl chloride	75-01-4			0.7	0.7	mg/kg	0.001	U	0.06	U	0.0023		0.065	U	0.06	U
Chloroethane	75-00-3			100	NS	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
1,1-Dichloroethene	75-35-4			3	3	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
trans-1,2-Dichloroethene	156-60-5			1	1	mg/kg	0.0015	U	0.091	U	0.0027	U	0.098	U	0.09	U
Trichloroethene	79-01-6			0.3	0.3	mg/kg	0.00051	U	0.03	U	0.00089	U	0.033	U	0.032	
1,2-Dichlorobenzene	95-50-1			9	9	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
1,3-Dichlorobenzene	541-73-1			3	3	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
1,4-Dichlorobenzene	106-46-7			0.7	0.7	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
Methyl tert butyl ether	1634-04-4			0.1	0.1	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
p/m-Xylene	179601-23-1			100	100	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
o-Xylene	95-47-6			100	100	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
Xylenes, Total	1330-20-7			100	100	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
cis-1,2-Dichloroethene	156-59-2			0.1	0.1	mg/kg	0.001	U	0.06	U	0.0037		0.065	U	0.06	U
1,2-Dichloroethene, Total	540-59-0				NS	mg/kg	0.001	U	0.06	U	0.0037		0.065	U	0.06	U
Dibromomethane	74-95-3			500	NS	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
1,2,3-Trichloropropane	96-18-4			100	NS	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
Styrene	100-42-5			3	3	mg/kg	0.001	U	0.06	U	0.0018	U	0.065	U	0.06	U
Dichlorodifluoromethane	75-71-8			1000	NS	mg/kg	0.01	U	0.6	U	0.018	U	0.65	U	0.6	U
Acetone	67-64-1			6	6	mg/kg	0.49	E	0.16		0.044	U	0.65	U	0.6	U
Carbon disulfide	75-15-0			100	NS	mg/kg	0.01	U	0.6	U	0.018	U	0.65	U	0.6	U
Methyl ethyl ketone	78-93-3			4	4	mg/kg	0.01	U	0.6	U	0.018	U	0.65	U	0.6	U
Methyl isobutyl ketone	108-10-1			0.4	0.4	mg/kg	0.01	U	0.6	U	0.018	U	0.65	U	0.6	U
2-Hexanone	591-78-6			100	NS	mg/kg	0.01	U	0.6	U	0.018	U	0.65	U	0.6	U
Bromochloromethane	74-97-5				NS	mg/kg	0.002	U	0.12	U	0.0036	U	0.13	U	0.12	U
Tetrahydrofuran	109-99-9			500	NS	mg/kg	0.0041	U	0.24	U	0.0071	U	0.26	U	0.24	U

Summary of Phase 2 Soil Sample Analytical Results
MBTA Green Line Extension Project
Washington Street
Somerville, Massachusetts

LOCATION							GLC-C13(A)-DC-VOC (9) ¹			GLC-C13(B)-DC-VOC (9) ²		GLX-TPW-403-VOC (3')		GLX-TPW-401-VOC (3')		GLX-TPW-402-VOC (4')	
SAMPLING DATE							11/2/2019			11/2/2019		11/6/2019		11/6/2019		11/6/2019	
LAB SAMPLE ID							L1952035-25			L1952035-27		L1952792-04		L1952792-05		L1952792-06	
SAMPLE TYPE							SOIL			SOIL		SOIL		SOIL		SOIL	
SAMPLE DEPTH (ft.)																	
	CasNum	MA-LLAND	MA-ULAND	RCS-1-14	S-1	Units	Results	Qual		Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035							NS										
	2,2-Dichloropropane	594-20-7			NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	1,2-Dibromoethane	106-93-4		0.1	NS	mg/kg	0.001	U		0.06	U	0.0018	U	0.065	U	0.06	U
	1,3-Dichloropropane	142-28-9		500	0.1	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	1,1,1,2-Tetrachloroethane	630-20-6		0.1	NS	mg/kg	0.00051	U		0.03	U	0.00089	U	0.033	U	0.03	U
	Bromobenzene	108-86-1		100	NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	n-Butylbenzene	104-51-8			NS	mg/kg	0.001	U		0.06	U	0.0018	U	0.065	U	0.06	U
	sec-Butylbenzene	135-98-8			NS	mg/kg	0.001	U		0.06	U	0.0018	U	0.065	U	0.06	U
	tert-Butylbenzene	98-06-6		100	NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	o-Chlorotoluene	95-49-8		100	NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	p-Chlorotoluene	106-43-4			NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	1,2-Dibromo-3-chloropropane	96-12-8		10	30	mg/kg	0.0031	U		0.18	U	0.0053	U	0.2	U	0.18	U
	Hexachlorobutadiene	87-68-3		30	NS	mg/kg	0.0041	U		0.24	U	0.0071	U	0.26	U	0.24	U
	Isopropylbenzene	98-82-8		1000		mg/kg	0.001	U		0.06	U	0.0018	U	0.065	U	0.06	U
	p-Isopropyltoluene	99-87-6		100	NS	mg/kg	0.001	U		0.06	U	0.0018	U	0.065	U	0.06	U
	Naphthalene	91-20-3		4	4	mg/kg	0.0041	U		0.24	U	0.0071	U	0.26	U	0.24	U
	n-Propylbenzene	103-65-1		100	NS	mg/kg	0.001	U		0.06	U	0.0018	U	0.065	U	0.06	U
	1,2,3-Trichlorobenzene	87-61-6			NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	1,2,4-Trichlorobenzene	120-82-1		2	2	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	1,3,5-Trimethylbenzene	108-67-8		10	NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	1,2,4-Trimethylbenzene	95-63-6		1000	NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	Diethyl ether	60-29-7		100	NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	Diisopropyl Ether	108-20-3		100	NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	Ethyl-Tert-Butyl-Ether	637-92-3			NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	Tertiary-Amyl Methyl Ether	994-05-8			NS	mg/kg	0.002	U		0.12	U	0.0036	U	0.13	U	0.12	U
	1,4-Dioxane	123-91-1		0.2	0.2	mg/kg	0.082	U		4.8	U	0.14	U	5.2	U	4.8	U

Yellow shading indicates detected result is equal to or above one or more of the listed criteria.
Gray shading indicates nondetect detection limit is above one or more of the listed criteria.
Bold typeface indicates detection above metiond detection limit.

MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
MCP 2014 S-1 Cleanup Criteria effective April 25, 2014; the lowest S-1/GW-X standard is shown.
**EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

U - Not detected at the reported detection limit for the sample.
ND - Not detected.
E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
¹ - The laboratory reported two sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results and lowest detection limits have been tabulated. Refer to laboratory report for further detail.
² - The laboratory reported three sets of VOC results due to internal standard and/or surrogate nonconformances.
The highest detected results from the low-level analysis and detection limits from the high-level analysis have been tabulated due to significant internal standard issues with the low-level analysis. Refer to laboratory report for further detail.

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLC-WASH(A)		GLC-WASH(B)		GLX-TPW-401		GLX-TPW-401A		GLX-TPW-402		GLX-TPW-402A		GLX-TPW-403		GLX-TPW-403A		GLX-TPW-404		GLX-TPW-405		GLX-TPW-406				GLX-TPW-407		GLX-TPW-408	
						N/A		N/A		0-3/3 ft		0-1 ft		0-6/4 ft		0-4 ft		0-3/3 ft		0-3 ft		0-3/2 ft		0-3/2 ft		0-2/1 ft		1 ft		0-5/3 ft		0-4/3 ft	
						02/25/2020		02/25/2020		11/06/2019		03/01/2020		11/06/2019		03/09/2020		11/06/2019		03/01/2020		02/25/2020		02/25/2020		02/26/2020		02/26/2020		02/26/2020		02/26/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																					Low VOC		High VOC					
VOCs																																	
	Methylene chloride	mg/kg	0.1	NS	NS	NA		NA		0.33	U	NA		0.3	U	NA		0.0089	U	NA		0.0036	U	0.0037	U	0.0040	U	0.22	U	0.0030	U	0.0045	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	Chloroform	mg/kg	0.2	NS	NS	NA		NA		0.098	U	NA		0.09	U	NA		0.0027	U	NA		0.0011	U	0.0011	U	0.0012	U	0.066	U	0.00091	U	0.0014	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		NA		0.041		NA		2		NA		0.00089	U	NA		0.012		0.0011		0.013		0.14		0.0096		0.14	
	Chlorobenzene	mg/kg	1	NS	NS	NA		NA		0.033	U	NA		0.03	U	NA		0.00089	U	NA		0.00036	U	0.00037	U	0.00040	U	0.022	U	0.00030	U	0.00045	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		NA		0.26	U	NA		0.24	U	NA		0.0071	U	NA		0.0028	U	0.0029	U	0.0032	U	0.18	U	0.0024	U	0.0036	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		NA		0.033	U	NA		0.03	U	NA		0.00089	U	NA		0.00036	U	0.00037	U	0.00040	U	0.022	U	0.00030	U	0.0018	
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		NA		0.033	U	NA		0.03	U	NA		0.00089	U	NA		0.00036	U	0.00037	U	0.00040	U	0.022	U	0.00030	U	0.00045	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		NA		0.033	U	NA		0.03	U	NA		0.00089	U	NA		0.00036	U	0.00037	U	0.00040	U	0.022	U	0.00030	U	0.00045	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		NA		0.033	U	NA		0.03	U	NA		0.00089	U	NA		0.00036	U	0.00037	U	0.00040	U	0.022	U	0.00030	U	0.00045	U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA		NA		0.033	U	NA		0.03	U	NA		0.00089	U	NA		0.00036	U	0.00037	U	0.00040	U	0.022	U	0.00030	U	0.00045	U
	Bromoform	mg/kg	0.1	NS	NS	NA		NA		0.26	U	NA		0.24	U	NA		0.0071	U	NA		0.0028	U	0.0029	U	0.0032	U	0.18	U	0.0024	U	0.0036	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		NA		0.033	U	NA		0.03	U	NA		0.00089	U	NA		0.00036	U	0.00037	U	0.00040	U	0.022	U	0.00030	U	0.00045	U
	Benzene	mg/kg	2	NS	NS	NA		NA		0.033	U	NA		0.03	U	NA		0.00089	U	NA		0.00036	U	0.00037	U	0.00040	U	0.022	U	0.00030	U	0.021	
	Toluene	mg/kg	30	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.0011		0.044	U	0.00060	U	0.00090	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	Chloromethane	mg/kg	100	NS	NS	NA		NA		0.26	U	NA		0.24	U	NA		0.0071	U	NA		0.0028	U	0.0029	U	0.0032	U	0.18	U	0.0024	U	0.0036	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0023		NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	Chloroethane	mg/kg	100	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		NA		0.065	U	NA		0.06	U	NA		0.0018	U	NA		0.00071	U	0.00073	U	0.00080	U	0.044	U	0.00060	U	0.00090	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		NA		0.098	U	NA		0.09	U	NA		0.0027	U	NA		0.0011	U	0.0011	U	0.0012	U	0.066	U	0.00091	U	0.0014	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		NA		0.033	U	NA		0.032		NA		0.00089	U	NA		0.00050		0.00037	U	0.0011		0.022	U	0.00083		0.014	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		NA		0.13	U	NA		0.12	U	NA		0.0036	U	NA		0.0014	U	0.0015	U	0.0016	U	0.088	U	0.0012	U	0.0018	U
	p/m-Xylene	mg/kg	100	NS	NS	NA		NA		0.13	U	NA																					

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLC-WASH(A)	GLC-WASH(B)	GLX-TPW-401	GLX-TPW-401A	GLX-TPW-402	GLX-TPW-402A	GLX-TPW-403	GLX-TPW-403A	GLX-TPW-404	GLX-TPW-405	GLX-TPW-406		GLX-TPW-407	GLX-TPW-408
						02/25/2020	02/25/2020	11/06/2019	03/01/2020	11/06/2019	03/09/2020	11/06/2019	03/01/2020	02/25/2020	02/25/2020	0-2/1 ft	1 ft	0-5/3 ft	0-4/3 ft
																Low VOC	High VOC		
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**														
	Naphthalene	mg/kg	4	NS	NS	NA	NA	0.26 U	NA	0.24 U	NA	0.0071 U	NA	0.0028 U	0.0029 U	0.0032 U	0.18 U	0.0024 U	0.0036 U
	n-Propylbenzene	mg/kg	100	NS	NS	NA	NA	0.065 U	NA	0.06 U	NA	0.0018 U	NA	0.00071 U	0.00073 U	0.00080 U	0.044 U	0.00060 U	0.00090 U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	Ethyl ether	mg/kg	100	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	Isopropyl Ether	mg/kg	100	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA	NA	0.13 U	NA	0.12 U	NA	0.0036 U	NA	0.0014 U	0.0015 U	0.0016 U	0.088 U	0.0012 U	0.0018 U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA	NA	5.2 U	NA	4.8 U	NA	0.14 U	NA	0.057 U	0.059 U	0.064 U	3.5 U	0.048 U	0.072 U
	Total VOCs	mg/kg	N/A	4	10	NA	NA	0.041	NA	2.03	NA	0.006	NA	0.013	0.001	0.325	0.140	0.061	0.190
SVOCs																			
	Acenaphthene	mg/kg	4	NS	NS	1.4 U	2	NA	0.14 U	NA	0.15 U	NA	0.15 U	0.15 U	0.14 U	0.14 U	NA	0.14 U	0.37
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Azobenzene	mg/kg	NS	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Fluoranthene	mg/kg	1,000	NS	NS	16	17	NA	0.12	NA	0.21	NA	0.12 U	0.55	0.11 U	0.11 U	NA	0.1 U	8.8
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	1.9 U	2 U	NA	0.2 U	NA	0.2 U	NA	0.21 U	0.2 U	0.19 U	0.19 U	NA	0.18 U	0.2 U
	Hexachlorobutadiene	mg/kg	30	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Hexachloroethane	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	Isophorone	mg/kg	100	NS	NS	1.6 U	1.6 U	NA	0.16 U	NA	0.16 U	NA	0.17 U	0.16 U	0.16 U	0.16 U	NA	0.15 U	0.17 U
	Naphthalene	mg/kg	4	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.2	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.68
	Nitrobenzene	mg/kg	500	NS	NS	1.6 U	1.6 U	NA	0.16 U	NA	0.16 U	NA	0.17 U	0.16 U	0.16 U	0.16 U	NA	0.15 U	0.17 U
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Butyl benzyl phthalate	mg/kg	100	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Di-n-butylphthalate	mg/kg	50	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Diethyl phthalate	mg/kg	10	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	Benzo(a)anthracene	mg/kg	7	NS	NS	7	7.2	NA	0.11 U	NA	0.13	NA	0.12 U	0.36	0.11 U	0.11 U	NA	0.1 U	5.9
	Benzo(a)pyrene	mg/kg	2	NS	NS	6.3	5.8	NA	0.14 U	NA	0.15 U	NA	0.15 U	0.45	0.14 U	0.14 U	NA	0.14 U	6.2
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	8.7	8.3	NA	0.11	NA	0.15	NA	0.12 U	0.6	0.11 U	0.11 U	NA	0.1 U	7.3
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	2.8	2.5	NA	0.11 U	NA	0.11 U	NA	0.12 U	0.18	0.11 U	0.11 U	NA	0.1 U	2.3
	Chrysene	mg/kg	70	NS	NS	6.6	7.1	NA	0.11 U	NA	0.11	NA	0.12 U	0.4	0.11 U	0.11 U	NA	0.1 U	5.2
	Acenaphthylene	mg/kg	1	NS	NS	1.4 U	1.4 U	NA	0.14 U	NA	0.15 U	NA	0.15 U	0.21	0.14 U	0.14 U	NA	0.14 U	0.88
	Anthracene	mg/kg	1,000	NS	NS	3.5	4.2	NA	0.11 U	NA	0.11 U	NA	0.12 U	0.19	0.11 U	0.11 U	NA	0.1 U	1.9
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	4	3.1	NA	0.14 U	NA	0.15 U	NA	0.15 U	0.46	0.14 U	0.14 U	NA	0.14 U	3.4
	Fluorene	mg/kg	1,000	NS	NS	1.8 U	2.2	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.62
	Phenanthrene	mg/kg	10	NS	NS	11	20	NA	0.11 U	NA	0.11 U	NA	0.12 U	0.3	0.11 U	0.11 U	NA	0.1 U	5.8
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.85	0.78	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.094	0.075 U	0.075 U	NA	0.072 U	0.84
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS	4.2	3.4	NA	0.14 U	NA	0.15 U	NA	0.15 U	0.38	0.14 U	0.14 U	NA	0.14 U	3.8
	Pyrene	mg/kg	1,000	NS	NS	13	15	NA	0.12	NA	0.2	NA	0.12	0.56	0.11 U	0.11 U	NA	0.1 U	7.6
	Aniline	mg/kg	1,000	NS	NS	2.2 U	2.2 U	NA	0.22 U	NA	0.22 U	NA	0.23 U	0.22 U	0.22 U	0.21 U	NA	0.2 U	0.23 U
	4-Chloroaniline	mg/kg	1	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	Dibenzofuran	mg/kg	100	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.48
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.16	0.075 U	0.075 U	NA	0.072 U	0.23
	Acetophenone	mg/kg	1,000	NS	NS	1.8 U	1.8 U	NA	0.18 U	NA	0.18 U	NA	0.19 U	0.18 U	0.18 U	0.18 U	NA	0.17 U	0.19 U
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.75 U	0.76 U	NA	0.076 U	NA	0.077 U	NA	0.081 U	0.077 U	0.075 U	0.075 U	NA	0.072 U	0.079 U
	2-Nitrophenol	mg/kg	100	NS	NS	3.9 U	3.9 U	NA	0.39 U	NA	0.39 U	NA	0.42 U	0.4 U	0.39 U	0.39 U	NA	0.37 U	0.41 U
	4-Nitrophenol	mg/kg	100	NS	NS	2.5 U	2.5 U	NA	0.25 U	NA	0.26 U	NA	0.27 U	0.26 U	0.25 U	0.25 U	NA	0.24 U	0.26 U

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLC-WASH(A)		GLC-WASH(B)		GLX-TPW-401		GLX-TPW-401A		GLX-TPW-402		GLX-TPW-402A		GLX-TPW-403		GLX-TPW-403A		GLX-TPW-404		GLX-TPW-405		GLX-TPW-406		GLX-TPW-407		GLX-TPW-408			
						N/A		N/A		0-3/3 ft		0-1 ft		0-6/4 ft		0-4 ft		0-3/3 ft		0-3 ft		0-3/2 ft		0-3/2 ft		0-2/1 ft		1 ft		0-5/3 ft		0-4/3 ft	
						02/25/2020		02/25/2020		11/06/2019		03/01/2020		11/06/2019		03/09/2020		11/06/2019		03/01/2020		02/25/2020		02/25/2020		02/26/2020		02/26/2020		02/26/2020		02/26/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																					Low VOC		High VOC					
	2,4-Dinitrophenol	mg/kg	3	NS	NS	8.6	U	8.7	U	NA		0.87	U	NA		0.88	U	NA		0.93	U	0.88	U	0.86	U	0.86	U	NA		0.82	U	0.9	U
	Pentachlorophenol	mg/kg	3	NS	NS	3.6	U	3.6	U	NA		0.36	U	NA		0.36	U	NA		0.39	U	0.37	U	0.36	U	0.36	U	NA		0.34	U	0.38	U
	Phenol	mg/kg	1	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.17	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	2-Methylphenol	mg/kg	500	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS	2.6	U	2.6	U	NA		0.26	U	NA		0.26	U	NA		0.28	U	0.26	U	0.26	U	0.26	U	NA		0.24	U	0.27	U
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	1.8	U	1.8	U	NA		0.18	U	NA		0.18	U	NA		0.19	U	0.18	U	0.18	U	0.18	U	NA		0.17	U	0.19	U
	Pyridine	mg/kg	500	NS	NS	1.9	U	2	U	NA		0.2	U	NA		0.2	U	NA		0.21	U	0.2	U	0.19	U	0.19	U	NA		0.18	U	0.2	U
	Total SVOCs	mg/kg	N/A	100	100	84.0		98.6		NA		0.350		NA		0.80		NA		0.320		4.89		ND		ND		NA		ND		62.3	
Pesticides																																	
	Delta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Lindane	mg/kg	0.003	NS	NS	NA		NA		NA		NA		NA		0.000566	U	NA		NA		0.000594	U	0.000573	U	0.000563	U	NA		0.000552	U	0.000590	U
	Alpha-BHC	mg/kg	50	NS	NS	NA		NA		NA		NA		NA		0.000707	U	NA		NA		0.000742	U	0.000716	U	0.000704	U	NA		0.000690	U	0.000738	U
	Beta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Heptachlor	mg/kg	0.3	NS	NS	NA		NA		NA		NA		NA		0.000849	U	NA		NA		0.000890	U	0.000859	U	0.000845	U	NA		0.000828	U	0.000885	U
	Aldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA		NA		NA		NA		NA		0.00318	U	NA		NA		0.00334	U	0.00322	U	0.00317	U	NA		0.00310	U	0.00332	U
	Endrin	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		0.000707	U	NA		NA		0.000742	U	0.000716	U	0.000704	U	NA		0.000690	U	0.00125	IP
	Endrin ketone	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Dieldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		0.00106	U	NA		NA		0.00111	U	0.00107	U	0.00106	U	NA		0.00104	U	0.00111	U
	4,4'-DDE	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	4,4'-DDD	mg/kg	8	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	4,4'-DDT	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		0.00318	U	NA		NA		0.00334	U	0.00322	U	0.00317	U	NA		0.00310	U	0.00332	U
	Endosulfan I	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Endosulfan II	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		0.000707	U	NA		NA		0.000742	U	0.000716	U	0.000704	U	NA		0.000690	U	0.000738	U
	Methoxychlor	mg/kg	200	NS	NS	NA		NA		NA		NA		NA		0.00318	U	NA		NA		0.00334	U	0.00322	U	0.00317	U	NA		0.00310	U	0.00332	U
	Chlordane	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		0.0141	U	NA		NA		0.0148	U	0.0143	U	0.0141	U	NA		0.0138	U	0.0148	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		0.00170	U	NA		NA		0.00178	U	0.00172	U	0.00169	U	NA		0.00166	U	0.00177	U
Herbicides																																	
	MCPP	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		3.7	U	NA		NA		3.7	U	3.6	U	3.6	U	NA		3.5	U	3.7	U
	MCPA	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		3.7	U	NA		NA		3.7	U	3.6	U	3.6	U	NA		3.5	U	3.7	U
	Dalapon	mg/kg	1,000	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	Dicamba	mg/kg	500	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	Dichloroprop	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	2,4-D	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	2,4-DB	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	2,4,5-T	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		0.037	U	NA		NA		0.037	U	0.036	U	0.036	U	NA		0.035	U	0.037	U
PCB Aroclors																																	
	Aroclor-1016	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1221	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1232	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1242	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1248	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1254	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1260	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1262	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	Aroclor-1268	mg/kg	1	NS	NS	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
	PCBs, Total	mg/kg	1	2	2	0.0348	U	0.0360	U	0.0350	U	0.0358	U	0.0385	U	NA		0.0393	U	0.0373	U	0.0367	U	0.0349	U	0.0356	U	NA		0.0342	U	0.0373	U
TPH																																	
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	216		195		NA		114		NA		35.5		NA		112	U	122		35.3	U	35.8	U	NA		34.1	U	397	
Metals, total																																	
	Antimony	mg/kg	20	NS	NS	2.59		2.32		2.10	U	NA		2.35	U	NA		2.40	U	NA		NA		NA		NA		NA		NA		NA	
	Arsenic	mg/kg	20	40	40	8.13		9.58		2.31		4.02		14.3		NA																	

TABLE 2
Additional Characterization Soil Ananalytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLC-WASH(A)	GLC-WASH(B)	GLX-TPW-401	GLX-TPW-401A	GLX-TPW-402	GLX-TPW-402A	GLX-TPW-403	GLX-TPW-403A	GLX-TPW-404	GLX-TPW-405	GLX-TPW-406		GLX-TPW-407	GLX-TPW-408														
						N/A	N/A	0-3/3 ft	0-1 ft	0-6/4 ft	0-4 ft	0-3/3 ft	0-3 ft	0-3/2 ft	0-3/2 ft	0-2/1 ft	1 ft	0-5/3 ft	0-4/3 ft														
						02/25/2020	02/25/2020	11/06/2019	03/01/2020	11/06/2019	03/09/2020	11/06/2019	03/01/2020	02/25/2020	02/25/2020	02/26/2020	02/26/2020	02/26/2020	02/26/2020														
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**											Low VOC		High VOC															
	Vanadium	mg/kg	400	NS	NS	12.9		14.7		7.86		NA		32.7		NA		13.3		NA		NA		NA		NA		NA		NA		NA	
	Zinc	mg/kg	1,000	NS	NS	77.5		113		24.6		NA		127		NA		73.9		NA		NA		NA		NA		NA		NA		NA	

TABLE 2
Additional Characterization Soil Ananalytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLC-WASH(A)		GLC-WASH(B)		GLX-TPW-401		GLX-TPW-401A		GLX-TPW-402		GLX-TPW-402A		GLX-TPW-403		GLX-TPW-403A		GLX-TPW-404		GLX-TPW-405		GLX-TPW-406				GLX-TPW-407		GLX-TPW-408	
						02/25/2020		02/25/2020		11/06/2019		03/01/2020		11/06/2019		03/09/2020		11/06/2019		03/01/2020		02/25/2020		02/25/2020		02/26/2020		02/26/2020		02/26/2020		02/26/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																			Low VOC		High VOC							
Metals, TCLP																																	
	Lead	mg/L	5*	NS	NS	NA		0.500	U	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		0.500	U		
General Chemistry																																	
	Ignitability	none	NS	NS	NS	NI		NI		NA		NI		NA		NI		NA		NI		NI		NI		NI		NA		NI		NI	
	Specific conductance	umhos/cm	NS	4,000	8,000	34		41		NA		160		NA		40		NA		84		81		60		120		NA		91		60	
	pH	su	NS	>2 <12.5	>2 <12.5	8.4		8.6		6.8		9.0		9.2		8.9		10.0		8.1		7.8		8.0		9.8		NA		9.8		8.5	
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U	10	U	NA		10	U	NA		10	U	NA		10	U	10	U	10	U	10	U	NA		10	U	10	U
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U	10	U	NA		10	U	NA		10	U	NA		10	U	10	U	10	U	10	U	NA		10	U	10	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-409	GLX-TPW-410	GLX-TPW-411	GLX-TPW-412	GLX-TPW-601								GLX-TPW-602								GLX-TPW-603						
						0-3/1.5-2 ft 03/16/2020	0-5/1 ft 02/26/2020	0-4/2-2.5 ft 03/27/2020	0-2/1-2 ft 03/01/2020	0-8 ft 10/20/2019	0-2/2 ft 10/20/2019	2-5/3 ft 10/20/2019	5-8/6 ft 10/20/2019	0-8 ft 10/20/2019	0-2/2 ft 10/20/2019	2-5/4.5 ft 10/20/2019	5-8/6.5 ft 10/20/2019	0-5 ft 10/20/2019	0-2/1.5 ft 10/20/2019	2-5/3 ft 10/20/2019												
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																											
VOCs																																
	Methylene chloride	mg/kg	0.1	NS	NS	0.2	U	0.0043	U	0.0025	U	0.32	U	NA	0.0035	U	0.54	U	0.0038	U	NA	0.28	U	2.4	U	0.0050	U	NA	0.0033	U	0.0033	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	Chloroform	mg/kg	0.2	NS	NS	0.059	U	0.0013	U	0.00074	U	0.095	U	NA	0.001	U	0.16	U	0.0011	U	NA	0.084	U	0.71	U	0.0015	U	NA	0.0010	U	0.00098	U
	Carbon tetrachloride	mg/kg	5	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	Tetrachloroethene	mg/kg	1	NS	NS	1.1		0.014		0.0029		0.032	U	NA	0.0012		0.7		0.00038	U	NA	0.028	U	0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	Chlorobenzene	mg/kg	1	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA	0.00035	U	0.054	U	0.00038	U	NA	0.028	U	0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	0.16	U	0.0035	U	0.0020	U	0.25	U	NA	0.0028	U	0.43	U	0.0030	U	NA	0.22	U	1.9	U	0.0040	U	NA	0.0027	U	0.0026	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	0.02	U	0.00046		0.00025	U	0.032	U	NA	0.00035	U	0.054	U	0.00038	U	NA	0.028	U	0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA	0.00035	U	0.054	U	0.00038	U	NA	0.028	U	0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA	0.00035	U	0.054	U	0.00038	U	NA	0.028	U	0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA	0.00035	U	0.054	U	0.00038	U	NA	0.028	U	0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA	0.00035	U	0.054	U	0.00038	U	NA	0.028	U	0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	Bromoform	mg/kg	0.1	NS	NS	0.16	U	0.0035	U	0.0020	U	0.25	U	NA	0.0028	U	0.43	U	0.0030	U	NA	0.22	U	1.9	U	0.0040	U	NA	0.0027	U	0.0026	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	0.02	U	0.00043	U	0.00025	U	0.032	U	NA	0.00035	U	0.054	U	0.00038	U	NA	0.028	U	0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	Benzene	mg/kg	2	NS	NS	0.02	U	0.00043	U	0.0020		0.032	U	NA	0.00035	U	0.054	U	0.00038	U	NA	0.044		0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	Toluene	mg/kg	30	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.11		0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	Ethylbenzene	mg/kg	40	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	Chloromethane	mg/kg	100	NS	NS	0.16	U	0.0035	U	0.0020	U	0.25	U	NA	0.0028	U	0.43	U	0.0030	U	NA	0.22	U	1.9	U	0.0040	U	NA	0.0027	U	0.0026	U
	Bromomethane	mg/kg	0.5	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA	0.0014	U	0.22	U	0.0015	U	NA	0.11	U	0.94	U	0.0020	U	NA	0.0013	U	0.0013	U
	Vinyl chloride	mg/kg	0.7	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	Chloroethane	mg/kg	100	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA	0.0014	U	0.22	U	0.0015	U	NA	0.11	U	0.94	U	0.0020	U	NA	0.0013	U	0.0013	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	0.039	U	0.00087	U	0.00049	U	0.063	U	NA	0.0007	U	0.11	U	0.00076	U	NA	0.056	U	0.47	U	0.0010	U	NA	0.00066	U	0.00065	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	0.059	U	0.0013	U	0.00074	U	0.095	U	NA	0.001	U	0.16	U	0.0011	U	NA	0.084	U	0.71	U	0.0015	U	NA	0.0010	U	0.00098	U
	Trichloroethene	mg/kg	0.3	NS	NS	0.05		0.0012		0.00025	U	0.032	U	NA	0.00035	U	0.054	U	0.00038	U	NA	0.028	U	0.24	U	0.00050	U	NA	0.00033	U	0.00033	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.078	U	0.0017	U	0.00099	U	0.13	U	NA	0.0014	U	0.22	U	0.0015	U	NA	0.11	U	0.94	U	0.0020	U	NA	0.0013	U	0.0013	U
	1,3-Dichlorobenzene	mg/kg	3	NS																												

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Sample Location: Sample Depth^: Sample Date:						GLX-TPW-409	GLX-TPW-410	GLX-TPW-411	GLX-TPW-412	GLX-TPW-601				GLX-TPW-602				GLX-TPW-603		
						0-3/1.5-2 ft 03/16/2020	0-5/1 ft 02/26/2020	0-4/2-2.5 ft 03/27/2020	0-2/1-2 ft 03/01/2020	0-8 ft 10/20/2019	0-2/2 ft 10/20/2019	2-5/3 ft 10/20/2019	5-8/6 ft 10/20/2019	0-8 ft 10/20/2019	0-2/2 ft 10/20/2019	2-5/4.5 ft 10/20/2019	5-8/6.5 ft 10/20/2019	0-5 ft 10/20/2019	0-2/1.5 ft 10/20/2019	2-5/3 ft 10/20/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**															
	Naphthalene	mg/kg	4	NS	NS	0.16 U	0.0035 U	0.0020 U	14	NA	0.0028 U	0.43 U	0.0030 U	NA	1	93	0.0040 U	NA	0.0027 U	0.0026 U
	n-Propylbenzene	mg/kg	100	NS	NS	0.039 U	0.00087 U	0.00049 U	0.063 U	NA	0.0007 U	0.11 U	0.00076 U	NA	0.056 U	0.47 U	0.0010 U	NA	0.00066 U	0.00065 U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	0.078 U	0.0017 U	0.00099 U	0.13 U	NA	0.0014 U	0.22 U	0.0015 U	NA	0.11 U	0.94 U	0.0020 U	NA	0.0013 U	0.0013 U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.078 U	0.0017 U	0.00099 U	0.13 U	NA	0.0014 U	0.22 U	0.0015 U	NA	0.11 U	0.94 U	0.0020 U	NA	0.0013 U	0.0013 U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	0.078 U	0.0017 U	0.00099 U	0.13 U	NA	0.0014 U	0.22 U	0.0015 U	NA	0.11 U	0.94 U	0.0020 U	NA	0.0013 U	0.0013 U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	0.078 U	0.0017 U	0.00099 U	0.13 U	NA	0.0014 U	0.22 U	0.0015 U	NA	0.11 U	1.2	0.0020 U	NA	0.0013 U	0.0013 U
	Ethyl ether	mg/kg	100	NS	NS	0.078 U	0.0017 U	0.00099 U	0.13 U	NA	0.0014 U	0.22 U	0.0015 U	NA	0.11 U	0.94 U	0.0020 U	NA	0.0013 U	0.0013 U
	Isopropyl Ether	mg/kg	100	NS	NS	0.078 U	0.0017 U	0.00099 U	0.13 U	NA	0.0014 U	0.22 U	0.0015 U	NA	0.11 U	0.94 U	0.0020 U	NA	0.0013 U	0.0013 U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	0.078 U	0.0017 U	0.00099 U	0.13 U	NA	0.0014 U	0.22 U	0.0015 U	NA	0.11 U	0.94 U	0.0020 U	NA	0.0013 U	0.0013 U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	0.078 U	0.0017 U	0.00099 U	0.13 U	NA	0.0014 U	0.22 U	0.0015 U	NA	0.11 U	0.94 U	0.0020 U	NA	0.0013 U	0.0013 U
	1,4-Dioxane	mg/kg	0.2	NS	NS	3.1 U	0.069 U	0.04 U	5.1 U	NA	0.056 U	8.7 U	0.061 U	NA	4.5 U	38 U	0.08 U	NA	0.053 U	0.052 U
	Total VOCs	mg/kg	N/A	4	10	1.15	0.017	0.120	14	NA	0.098	0.70	0.034	NA	1.23	94.2	0.110	NA	0.022	0.027
SVOCs																				
	Acenaphthene	mg/kg	4	NS	NS	0.18	0.15 U	0.74 U	3.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Azobenzene	mg/kg	NS	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Fluoranthene	mg/kg	1,000	NS	NS	4.3	0.2	20	9.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.2 U	0.2 U	1 U	0.37 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hexachloroethane	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Isophorone	mg/kg	100	NS	NS	0.16 U	0.17 U	0.84 U	0.31 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Naphthalene	mg/kg	4	NS	NS	0.46	0.19 U	1.3	9.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nitrobenzene	mg/kg	500	NS	NS	0.16 U	0.17 U	0.84 U	0.31 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Diethyl phthalate	mg/kg	10	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(a)anthracene	mg/kg	7	NS	NS	2.2	0.11 U	10	4.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(a)pyrene	mg/kg	2	NS	NS	1.9	0.15 U	11	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	2.2	0.11 U	14	5.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.71	0.11 U	4.4	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Chrysene	mg/kg	70	NS	NS	1.8	0.11 U	9.8	3.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Acenaphthylene	mg/kg	1	NS	NS	0.25	0.15 U	1.6	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Anthracene	mg/kg	1,000	NS	NS	0.87	0.11 U	2.1	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.89	0.15 U	6.6	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Fluorene	mg/kg	1,000	NS	NS	0.31	0.19 U	0.93 U	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Phenanthrene	mg/kg	10	NS	NS	2.3	0.13	6.1	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.24	0.08 U	1.5	0.56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS	1	0.15 U	7.2	2.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Pyrene	mg/kg	1,000	NS	NS	3.6	0.17	19	8.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aniline	mg/kg	1,000	NS	NS	0.22 U	0.23 U	1.1 U	0.41 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4-Chloroaniline	mg/kg	1	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dibenzofuran	mg/kg	100	NS	NS	0.21	0.19 U	0.93 U	3.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.15	0.08 U	0.49	3.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Acetophenone	mg/kg	1,000	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.077 U	0.08 U	0.39 U	0.14 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2-Nitrophenol	mg/kg	100	NS	NS	0.39 U	0.41 U	2 U	0.74 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4-Nitrophenol	mg/kg	100	NS	NS	0.26 U	0.26 U	1.3 U	0.48 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-409	GLX-TPW-410	GLX-TPW-411	GLX-TPW-412	GLX-TPW-601				GLX-TPW-602				GLX-TPW-603		
						0-3/1.5-2 ft 03/16/2020	0-5/1 ft 02/26/2020	0-4/2-2.5 ft 03/27/2020	0-2/1-2 ft 03/01/2020	0-8 ft 10/20/2019	0-2/2 ft 10/20/2019	2-5/3 ft 10/20/2019	5-8/6 ft 10/20/2019	0-8 ft 10/20/2019	0-2/2 ft 10/20/2019	2-5/4.5 ft 10/20/2019	5-8/6.5 ft 10/20/2019	0-5 ft 10/20/2019	0-2/1.5 ft 10/20/2019	2-5/3 ft 10/20/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**															
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.88 U	0.91 U	4.4 U	1.6 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Pentachlorophenol	mg/kg	3	NS	NS	0.36 U	0.38 U	1.8 U	0.68 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Phenol	mg/kg	1	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2-Methylphenol	mg/kg	500	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS	0.26 U	0.27 U	1.3 U	0.49 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.18 U	0.19 U	0.93 U	0.34 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Pyridine	mg/kg	500	NS	NS	0.2 U	0.2 U	1 U	0.37 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Total SVOCs	mg/kg	N/A	100	100	23.6	0.50	115	85.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pesticides																				
	Delta-BHC	mg/kg	10	NS	NS	0.00174 U	0.00182 U	0.00870 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lindane	mg/kg	0.003	NS	NS	0.000581 U	0.000608 U	0.00290 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Alpha-BHC	mg/kg	50	NS	NS	0.000727 U	0.000760 U	0.00362 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Beta-BHC	mg/kg	10	NS	NS	0.00174 U	0.00182 U	0.00870 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Heptachlor	mg/kg	0.3	NS	NS	0.000872 U	0.000912 U	0.00435 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aldrin	mg/kg	0.08	NS	NS	0.00174 U	0.00182 U	0.00870 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.00327 U	0.00342 U	0.0163 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endrin	mg/kg	10	NS	NS	0.000727 U	0.000760 U	0.00362 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endrin ketone	mg/kg	10	NS	NS	0.00174 U	0.00182 U	0.00870 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dieldrin	mg/kg	0.08	NS	NS	0.00109 U	0.00114 U	0.00544 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4,4'-DDE	mg/kg	6	NS	NS	0.00174 U	0.00182 U	0.00870 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4,4'-DDD	mg/kg	8	NS	NS	0.00174 U	0.00182 U	0.00870 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4,4'-DDT	mg/kg	6	NS	NS	0.00327 U	0.00342 U	0.0320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endosulfan I	mg/kg	0.5	NS	NS	0.00174 U	0.00182 U	0.00870 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endosulfan II	mg/kg	0.5	NS	NS	0.00174 U	0.00182 U	0.00870 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endosulfan sulfate	mg/kg	0.5	NS	NS	0.000727 U	0.000760 U	0.00362 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methoxychlor	mg/kg	200	NS	NS	0.00327 U	0.00342 U	0.0163 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Chlordane	mg/kg	0.7	NS	NS	0.0145 U	0.0152 U	0.123	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00174 U	0.00182 U	0.00870 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides																				
	MCPP	mg/kg	NS	NS	NS	3.6 U	3.8 U	3.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MCPA	mg/kg	100	NS	NS	3.6 U	3.8 U	3.7 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dalapon	mg/kg	1,000	NS	NS	0.036 U	0.038 U	0.037 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dicamba	mg/kg	500	NS	NS	0.036 U	0.038 U	0.037 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dichloroprop	mg/kg	NS	NS	NS	0.036 U	0.038 U	0.037 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4-D	mg/kg	100	NS	NS	0.036 U	0.038 U	0.037 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4-DB	mg/kg	100	NS	NS	0.036 U	0.038 U	0.037 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4,5-T	mg/kg	100	NS	NS	0.036 U	0.038 U	0.037 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.036 U	0.038 U	0.037 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB Aroclors																				
	Aroclor-1016	mg/kg	1	NS	NS	0.0355 U	0.0363 U	0.0367 U	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
	Aroclor-1221	mg/kg	1	NS	NS	0.0355 U	0.0363 U	0.0367 U	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
	Aroclor-1232	mg/kg	1	NS	NS	0.0355 U	0.0363 U	0.0367 U	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
	Aroclor-1242	mg/kg	1	NS	NS	0.0355 U	0.0363 U	0.0367 U	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
	Aroclor-1248	mg/kg	1	NS	NS	0.0355 U	0.0363 U	0.0367 U	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
	Aroclor-1254	mg/kg	1	NS	NS	0.0355 U	0.0363 U	0.0367 U	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
	Aroclor-1260	mg/kg	1	NS	NS	0.0355 U	0.0363 U	0.0886	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
	Aroclor-1262	mg/kg	1	NS	NS	0.0355 U	0.0363 U	0.0367 U	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
	Aroclor-1268	mg/kg	1	NS	NS	0.0355 U	0.0363 U	0.0367 U	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
	PCBs, Total	mg/kg	1	2	2	0.0355 U	0.0363 U	0.0886	0.0338 U	0.034 U	NA	NA	NA	0.036 U	NA	NA	NA	0.034 U	NA	NA
TPH																				
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	527	110	1,450	308	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals, total																				
	Antimony	mg/kg	20	NS	NS	NA	NA	2.20 U	NA	2.10 U	NA	NA	NA	3.16	NA	NA	NA	1.98 U	NA	NA
	Arsenic	mg/kg	20	40	40	11.6	3.70	6.45	2.97	10.3	NA	NA	NA	17.3	NA	NA	NA	24.9	NA	NA
	Barium	mg/kg	1,000	NS	NS	30.1	16.6	51.3	18.2	18.4	NA	NA	NA	27.2	NA	NA	NA	16.8	NA	NA
	Beryllium	mg/kg	90	NS	NS	NA	NA	0.366	NA	0.210 U	NA	NA	NA	0.210 U	NA	NA	NA	0.198 U	NA	NA
	Cadmium	mg/kg	70	30	80	1.20	0.598	0.555	0.537	0.421 U	NA	NA	NA	0.822	NA	NA	NA	0.397 U	NA	NA
	Chromium	mg/kg	100	1,000	1,000	22.7	9.97	24.8	11.1	10.1	NA	NA	NA	13.6	NA	NA	NA	8.27	NA	NA
	Lead	mg/kg	200	1,000	2,000	144	71.0	359	46.4	24.8	NA	NA	NA	56.6	NA	NA	NA	21.6	NA	NA
	Mercury	mg/kg	20	10	10	0.082 U	0.082 U	0.175	0.140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nickel	mg/kg	600	NS	NS	NA	NA	16.2	NA	7.53	NA	NA	NA	11.0	NA	NA	NA	6.64	NA	NA
	Selenium	mg/kg	400	NS	NS	2.12 U	2.28 U	2.20 U	2.02 U	2.10 U	NA	NA	NA	2.10 U	NA	NA	NA	1.98 U	NA	NA
	Silver	mg/kg	100	NS	NS	0.425 U	0.457 U	0.440 U	0.404 U	0.421 U	NA	NA	NA	0.420 U	NA	NA	NA	0.397 U	NA	NA
	Thallium	mg/kg	8	NS	NS	NA	NA	2.20 U	NA	2.10 U	NA	NA	NA	2.10 U	NA	NA	NA	1.98 U	NA	NA

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-409	GLX-TPW-410	GLX-TPW-411	GLX-TPW-412	GLX-TPW-601								GLX-TPW-602								GLX-TPW-603																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
										0-8 ft		0-2/2 ft		2-5/3 ft		5-8/6 ft		0-8 ft		0-2/2 ft		2-5/4.5 ft		5-8/6.5 ft		0-5 ft		0-2/1.5 ft		2-5/3 ft																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
										10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

TABLE 2
Additional Characterization Soil Ananalytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-409 0-3/1.5-2 ft 03/16/2020		GLX-TPW-410 0-5/1 ft 02/26/2020		GLX-TPW-411 0-4/2-2.5 ft 03/27/2020		GLX-TPW-412 0-2/1-2 ft 03/01/2020		GLX-TPW-601								GLX-TPW-602								GLX-TPW-603					
														0-8 ft		0-2/2 ft		2-5/3 ft		5-8/6 ft		0-8 ft		0-2/2 ft		2-5/4.5 ft		5-8/6.5 ft		0-5 ft		0-2/1.5 ft		2-5/3 ft	
						10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																														
Metals, TCLP																																			
	Lead	mg/L	5*	NS	NS	0.500	U		NA		1.09		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
General Chemistry																																			
	Ignitability	none	NS	NS	NS	NI			NI		NI		NI		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Specific conductance	umhos/cm	NS	4,000	8,000	120			220		79		300		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	pH	su	NS	>2 <12.5	>2 <12.5	9.0			8.1		8.4		9.1		NA		7.1		6.7		6.9		NA		7.6		7.6		6.9		NA		7.8		
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U		10	U		10	U		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U		10	U		10	U		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-603A		GLX-TPW-604				GLX-TPW-604A		GLX-TPW-605						GLX-TPW-605A		GLX-TPW-606											
						0-5 ft		0-5 ft		0-2/1 ft		2-5/3 ft		0-5 ft		0-8 ft		0-2/1 ft		2-5/3 ft		3 ft		5-8/8 ft		0-8 ft		0-5 ft		0-2/1 ft		2-5/4 ft	
						02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		02/08/2020		11/02/2019		11/02/2019		11/02/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																												
VOCs																																	
	Methylene chloride	mg/kg	0.1	NS	NS	NA		NA		0.0034	U	0.0045	U	NA		NA		0.0041	U	0.0047	U	0.0050	U	0.0036	U	NA		NA		0.0040	U	0.0024	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	Chloroform	mg/kg	0.2	NS	NS	NA		NA		0.0010	U	0.0013	U	NA		NA		0.0012	U	0.0014	U	0.0015	U	0.0011	U	NA		NA		0.0012	U	0.00072	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		NA		0.00034	U	0.00045	U	NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	Chlorobenzene	mg/kg	1	NS	NS	NA		NA		0.00034	U	0.00045	U	NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		NA		0.0027	U	0.0036	U	NA		NA		0.0032	U	0.0038	U	0.0040	U	0.0029	U	NA		NA		0.0032	U	0.0019	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		NA		0.00034	U	0.00045	U	NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		NA		0.00034	U	0.00045	U	NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		NA		0.00034	U	0.00045	U	NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		NA		0.00034	U	0.00045	U	NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA		NA		0.00034	U	0.00045	U	NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	Bromoform	mg/kg	0.1	NS	NS	NA		NA		0.0027	U	0.0036	U	NA		NA		0.0032	U	0.0038	U	0.0040	U	0.0029	U	NA		NA		0.0032	U	0.0019	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		NA		0.00034	U	0.00045	U	NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	Benzene	mg/kg	2	NS	NS	NA		NA		0.00034	U	0.00061		NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	Toluene	mg/kg	30	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	Chloromethane	mg/kg	100	NS	NS	NA		NA		0.0027	U	0.0036	U	NA		NA		0.0032	U	0.0038	U	0.0040	U	0.0029	U	NA		NA		0.0032	U	0.0019	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	Chloroethane	mg/kg	100	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		NA		0.0010	U	0.0013	U	NA		NA		0.0012	U	0.0014	U	0.0015	U	0.0011	U	NA		NA		0.0012	U	0.00072	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		NA		0.00034	U	0.00045	U	NA		NA		0.00041	U	0.00047	U	0.00050	U	0.00036	U	NA		NA		0.00040	U	0.00024	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U								

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW- 603A	GLX-TPW-604						GLX-TPW- 604A	GLX-TPW-605						GLX-TPW- 605A	GLX-TPW-606												
						0-5 ft	0-5 ft						0-5 ft	0-8 ft		0-2/1 ft		2-5/3 ft		3 ft		5-8/8 ft		0-8 ft	0-5 ft		0-2/1 ft		2-5/4 ft				
						02/08/2020	10/20/2019						02/08/2020	10/20/2019		10/20/2019		10/20/2019		10/20/2019		02/08/2020	11/02/2019		11/02/2019		11/02/2019						
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																												
	Naphthalene	mg/kg	4	NS	NS	NA		NA		0.0027	U	0.0036	U	NA		NA		0.0032	U	0.0038	U	0.0040	U	0.0029	U	NA		NA		0.0032	U	0.0019	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		NA		0.00068	U	0.00089	U	NA		NA		0.00081	U	0.00094	U	0.0010	U	0.00072	U	NA		NA		0.00080	U	0.00048	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	Ethyl ether	mg/kg	100	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	Isopropyl Ether	mg/kg	100	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		NA		0.0014	U	0.0018	U	NA		NA		0.0016	U	0.0019	U	0.0020	U	0.0014	U	NA		NA		0.0016	U	0.00096	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		NA		0.054	U	0.072	U	NA		NA		0.065	U	0.075	U	0.08	U	0.057	U	NA		NA		0.064	U	0.038	U
	Total VOCs	mg/kg	N/A	4	10	NA		NA		0.049		0.042		NA		NA		0.034		0.092		0.061		ND		NA		NA		0.043		0.016	
SVOCs																																	
	Acenaphthene	mg/kg	4	NS	NS	0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		0.85		NA		NA		NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Azobenzene	mg/kg	NS	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Fluoranthene	mg/kg	1,000	NS	NS	0.1	U	NA		NA		NA		0.19		NA		NA		NA		NA		NA		6.6		NA		NA		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.18	U	NA		NA		NA		0.19	U	NA		NA		NA		NA		NA		0.2	U	NA		NA		NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.072	U	NA		NA		NA		0.074	U	NA		NA		NA		NA		NA		0.079	U	NA		NA		NA	
	Isophorone	mg/kg	100	NS	NS	0.15	U	NA		NA		NA		0.16	U	NA		NA		NA		NA		NA		0.17	U	NA		NA		NA	
	Naphthalene	mg/kg	4	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.56		NA		NA		NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.15	U	NA		NA		NA		0.16	U	NA		NA		NA		NA		NA		0.17	U	NA		NA		NA	
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		0.19	U	NA		NA		NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.17	U	NA		NA		NA		0.18	U	NA																	

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-603A		GLX-TPW-604				GLX-TPW-604A		GLX-TPW-605						GLX-TPW-605A		GLX-TPW-606											
						0-5 ft		0-5 ft		0-2/1 ft		2-5/3 ft		0-5 ft		0-8 ft		0-2/1 ft		2-5/3 ft		3 ft		5-8/8 ft		0-8 ft		0-5 ft		0-2/1 ft		2-5/4 ft	
						02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		10/20/2019		02/08/2020		11/02/2019		11/02/2019		11/02/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																	Field Dup											
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.82	U	NA	NA	NA		0.85	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.9	U	NA	NA	NA	NA	NA	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.34	U	NA	NA	NA	NA	0.35	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.38	U	NA	NA	NA	NA	NA	NA	
	Phenol	mg/kg	1	NS	NS	0.17	U	NA	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.19	U	NA	NA	NA	NA	NA	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.17	U	NA	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.19	U	NA	NA	NA	NA	NA	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS	0.24	U	NA	NA	NA	NA	0.25	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.27	U	NA	NA	NA	NA	NA	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.17	U	NA	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.19	U	NA	NA	NA	NA	NA	NA	
	Pyridine	mg/kg	500	NS	NS	0.18	U	NA	NA	NA	NA	0.19	U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.2	U	NA	NA	NA	NA	NA	NA	
	Total SVOCs	mg/kg	N/A	100	100	ND		NA	NA	NA	NA	0.780		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	74.2		NA	NA	NA	NA	NA	NA	
Pesticides																																	
	Delta-BHC	mg/kg	10	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Lindane	mg/kg	0.003	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Alpha-BHC	mg/kg	50	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Beta-BHC	mg/kg	10	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Heptachlor	mg/kg	0.3	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Aldrin	mg/kg	0.08	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Endrin	mg/kg	10	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Endrin ketone	mg/kg	10	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Dieldrin	mg/kg	0.08	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	4,4'-DDE	mg/kg	6	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	4,4'-DDD	mg/kg	8	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	4,4'-DDT	mg/kg	6	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Methoxychlor	mg/kg	200	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Chlordane	mg/kg	0.7	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
Herbicides																																	
	MCPP	mg/kg	NS	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	MCPA	mg/kg	100	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Dalapon	mg/kg	1,000	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Dicamba	mg/kg	500	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	Dichloroprop	mg/kg	NS	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	2,4-D	mg/kg	100	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	2,4-DB	mg/kg	100	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	2,4,5-T	mg/kg	100	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA		NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	
PCB Aroclors																																	
	Aroclor-1016	mg/kg	1	NS	NS	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
	Aroclor-1221	mg/kg	1	NS	NS	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
	Aroclor-1232	mg/kg	1	NS	NS	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
	Aroclor-1242	mg/kg	1	NS	NS	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
	Aroclor-1248	mg/kg	1	NS	NS	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
	Aroclor-1254	mg/kg	1	NS	NS	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
	Aroclor-1260	mg/kg	1	NS	NS	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
	Aroclor-1262	mg/kg	1	NS	NS	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
	Aroclor-1268	mg/kg	1	NS	NS	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
	PCBs, Total	mg/kg	1	2	2	NA		0.035	U	NA	NA	NA		NA	0.037	U	NA	NA	NA	NA	NA	NA	NA	NA	NA		0.0349	U	NA	NA	NA	NA	
TPH																																	
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,00																														

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-603A	GLX-TPW-604			GLX-TPW-604A	GLX-TPW-605					GLX-TPW-605A	GLX-TPW-606			
						0-5 ft	0-5 ft	0-2/1 ft	2-5/3 ft	0-5 ft	0-8 ft	0-2/1 ft	2-5/3 ft	3 ft	5-8/8 ft	0-8 ft	0-5 ft	0-2/1 ft	2-5/4 ft	
						02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**										Field Dup					
	Vanadium	mg/kg	400	NS	NS	NA	12.0	NA	NA	NA	14.2	NA	NA	NA	NA	NA	17.5	NA	NA	NA
	Zinc	mg/kg	1,000	NS	NS	NA	33.3	NA	NA	NA	38.5	NA	NA	NA	NA	NA	35.5	NA	NA	NA

TABLE 2
Additional Characterization Soil Ananalytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^:						GLX-TPW-603A	GLX-TPW-604				GLX-TPW-604A	GLX-TPW-605						GLX-TPW-605A	GLX-TPW-606			
Sample Date:						0-5 ft	0-5 ft	0-2/1 ft	2-5/3 ft	0-5 ft	0-8 ft	0-2/1 ft	2-5/3 ft	3 ft	5-8/8 ft	0-8 ft	0-5 ft	0-2/1 ft	2-5/4 ft			
						02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019			
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**											Field Dup						
Metals, TCLP																						
	Lead	mg/L	5*	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
General Chemistry																						
	Ignitability	none	NS	NS	NS	NI	NA	NA	NA	NI	NA	NA	NA	NA	NA	NI	NA	NA	NA			
	Specific conductance	umhos/cm	NS	4,000	8,000	13	NA	NA	NA	11	NA	NA	NA	NA	NA	13	NA	NA	NA			
	pH	su	NS	>2 <12.5	>2 <12.5	7.7	NA	7.5	6.8	6.9	NA	7.5	6.6	NA	5.5	7.2	NA	6.8	6.4			
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U	NA	NA	10	U	NA	NA	NA	NA	10	U	NA	NA			
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U	NA	NA	10	U	NA	NA	NA	NA	10	U	NA	NA			

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-606A		GLX-TPW-607				GLX-TPW-607A				GLX-TPW-608				GLX-TPW-608A		GLX-TPW-609				GLX-TPW-609A							
						0-5 ft		0-5 ft		0-2/0.6 ft		2-5/4.6 ft		0-5 ft		0-5 ft		0-5 ft		0-5 ft		0-5 ft		0-5 ft		0-5 ft		0-5 ft					
						02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		02/08/2020		11/02/2019		11/02/2019		11/02/2019		02/08/2020		11/02/2019		11/02/2019		11/02/2019		02/08/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																												
VOCs																																	
	Methylene chloride	mg/kg	0.1	NS	NS	NA		NA		0.0038	U	0.0039	U	NA		NA		NA		0.0035	U	0.0047	U	NA		NA		0.0034	U	0.0032	U	NA	
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	Chloroform	mg/kg	0.2	NS	NS	NA		NA		0.0011	U	0.0012	U	NA		NA		NA		0.0011	U	0.0014	U	NA		NA		0.001	U	0.00096	U	NA	
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	Tetrachloroethene	mg/kg	1	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	Chlorobenzene	mg/kg	1	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		NA		0.0030	U	0.0031	U	NA		NA		NA		0.0028	U	0.0037	U	NA		NA		0.0027	U	0.0026	U	NA	
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	Bromoform	mg/kg	0.1	NS	NS	NA		NA		0.0030	U	0.0031	U	NA		NA		NA		0.0028	U	0.0037	U	NA		NA		0.0027	U	0.0026	U	NA	
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	Benzene	mg/kg	2	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	Toluene	mg/kg	30	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	Ethylbenzene	mg/kg	40	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	Chloromethane	mg/kg	100	NS	NS	NA		NA		0.0030	U	0.0031	U	NA		NA		NA		0.0028	U	0.0037	U	NA		NA		0.0027	U	0.0026	U	NA	
	Bromomethane	mg/kg	0.5	NS	NS	NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	Chloroethane	mg/kg	100	NS	NS	NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071	U	0.00094	U	NA		NA		0.00069	U	0.00064	U	NA	
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		NA		0.0011	U	0.0012	U	NA		NA		NA		0.0011	U	0.0014	U	NA		NA		0.001	U	0.00096	U	NA	
	Trichloroethene	mg/kg	0.3	NS	NS	NA		NA		0.00038	U	0.00039	U	NA		NA		NA		0.00035	U	0.00047	U	NA		NA		0.00034	U	0.00032	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	p/m-Xylene	mg/kg	100	NS	NS	NA		NA		0.0015	U	0.0016	U	NA		NA		NA		0.0014	U	0.0019	U	NA		NA		0.0014	U	0.0013	U	NA	
	o-Xylene	mg/kg	100	NS	NS	NA		NA		0.00075	U	0.00078	U	NA		NA		NA		0.00071													

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW- 606A	GLX-TPW-607						GLX-TPW-607A						GLX-TPW-608						GLX-TPW- 608A	GLX-TPW-609						GLX-TPW- 609A
						0-5 ft	0-5 ft		0-2/0.6 ft		2-5/4.6 ft		0-5 ft		0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft	0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft		
						02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	02/08/2020	11/02/2019	11/02/2019	11/02/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019	02/08/2020					
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																											
	Naphthalene	mg/kg	4	NS	NS	NA	NA	0.0030	U	0.0031	U	NA	NA	NA	0.0028	U	0.0037	U	NA	NA	0.0027	U	0.0026	U	NA	NA						
	n-Propylbenzene	mg/kg	100	NS	NS	NA	NA	0.00075	U	0.00078	U	NA	NA	NA	0.00071	U	0.00094	U	NA	NA	0.00069	U	0.00064	U	NA	NA						
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA	NA	0.0015	U	0.0016	U	NA	NA	NA	0.0014	U	0.0019	U	NA	NA	0.0014	U	0.0013	U	NA	NA						
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA	NA	0.0015	U	0.0016	U	NA	NA	NA	0.0014	U	0.0019	U	NA	NA	0.0014	U	0.0013	U	NA	NA						
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA	NA	0.0015	U	0.0016	U	NA	NA	NA	0.0014	U	0.0019	U	NA	NA	0.0014	U	0.0013	U	NA	NA						
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA	NA	0.0015	U	0.0016	U	NA	NA	NA	0.0014	U	0.0019	U	NA	NA	0.0014	U	0.0013	U	NA	NA						
	Ethyl ether	mg/kg	100	NS	NS	NA	NA	0.0015	U	0.0016	U	NA	NA	NA	0.0014	U	0.0019	U	NA	NA	0.0014	U	0.0013	U	NA	NA						
	Isopropyl Ether	mg/kg	100	NS	NS	NA	NA	0.0015	U	0.0016	U	NA	NA	NA	0.0014	U	0.0019	U	NA	NA	0.0014	U	0.0013	U	NA	NA						
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA	NA	0.0015	U	0.0016	U	NA	NA	NA	0.0014	U	0.0019	U	NA	NA	0.0014	U	0.0013	U	NA	NA						
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA	NA	0.0015	U	0.0016	U	NA	NA	NA	0.0014	U	0.0019	U	NA	NA	0.0014	U	0.0013	U	NA	NA						
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA	NA	0.06	U	0.063	U	NA	NA	NA	0.057	U	0.075	U	NA	NA	0.055	U	0.051	U	NA	NA						
	Total VOCs	mg/kg	N/A	4	10	NA	NA	0.066		0.030		NA	NA	NA	0.020		0.053		NA	NA	0.070		0.092		NA	NA						
SVOCs																																
	Acenaphthene	mg/kg	4	NS	NS	0.2	NA	NA	NA	0.15	U	0.15	U	NA	NA	NA	0.14	U	NA	NA	NA	NA	NA	0.14	U	NA						
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.074	U	NA	NA	0.08	U	0.078	U	NA	NA	NA	0.075	U	NA	NA	NA	NA	NA	0.075	U	NA						
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.074	U	NA	NA	0.08	U	0.078	U	NA	NA	NA	0.075	U	NA	NA	NA	NA	NA	0.075	U	NA						
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.074	U	NA	NA	0.08	U	0.078	U	NA	NA	NA	0.075	U	NA	NA	NA	NA	NA	0.075	U	NA						
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.074	U	NA	NA	0.08	U	0.078	U	NA	NA	NA	0.075	U	NA	NA	NA	NA	NA	0.075	U	NA						
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Azobenzene	mg/kg	NS	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Fluoranthene	mg/kg	1,000	NS	NS	1.7	NA	NA	NA	29		86		NA	NA	NA	0.11	U	NA	NA	NA	NA	NA	0.11	U	NA						
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.074	U	NA	NA	0.08	U	0.078	U	NA	NA	NA	0.075	U	NA	NA	NA	NA	NA	0.075	U	NA						
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.19	U	NA	NA	0.21	U	0.2	U	NA	NA	NA	0.19	U	NA	NA	NA	NA	NA	0.19	U	NA						
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Hexachloroethane	mg/kg	0.7	NS	NS	0.074	U	NA	NA	0.08	U	0.078	U	NA	NA	NA	0.075	U	NA	NA	NA	NA	NA	0.075	U	NA						
	Isophorone	mg/kg	100	NS	NS	0.16	U	NA	NA	0.17	U	0.17	U	NA	NA	NA	0.16	U	NA	NA	NA	NA	NA	0.16	U	NA						
	Naphthalene	mg/kg	4	NS	NS	0.33	NA	NA	NA	0.3		0.92		NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Nitrobenzene	mg/kg	500	NS	NS	0.16	U	NA	NA	0.17	U	0.17	U	NA	NA	NA	0.16	U	NA	NA	NA	NA	NA	0.16	U	NA						
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Diethyl phthalate	mg/kg	10	NS	NS	0.18	U	NA	NA	0.19	U	0.18	U	NA	NA	NA	0.18	U	NA	NA	NA	NA	NA	0.18	U	NA						
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.074	U	NA	NA	0.08	U	0.078	U	NA	NA	NA	0.075	U	NA	NA	NA	NA	NA	0.075	U	NA						
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.64	NA	NA	NA	16		48		NA	NA	NA	0.11	U	NA	NA	NA	NA	NA	0.11	U	NA						
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.64	NA	NA	NA	16		44		NA	NA	NA	0.14	U	NA	NA	NA	NA	NA	0.14	U	NA						
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	0																										

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-606A		GLX-TPW-607				GLX-TPW-607A				GLX-TPW-608				GLX-TPW-608A		GLX-TPW-609				GLX-TPW-609A							
						0-5 ft		0-5 ft		0-2/0.6 ft		2-5/4.6 ft		0-5 ft		0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1 ft		2-5/4 ft		0-5 ft	
						02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		02/08/2020		11/02/2019		11/02/2019		11/02/2019		02/08/2020		11/02/2019		11/02/2019		11/02/2019		02/08/2020	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**							Field Dup																					
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.85	U	NA		NA		NA		0.92	U	0.89	U	NA		NA		NA		0.86	U	NA		NA		0.86	U		
	Pentachlorophenol	mg/kg	3	NS	NS	0.36	U	NA		NA		NA		0.38	U	0.37	U	NA		NA		NA		0.36	U	NA		NA		0.36	U		
	Phenol	mg/kg	1	NS	NS	0.18	U	NA		NA		NA		0.21		0.5		NA		NA		NA		0.18	U	NA		NA		0.18	U		
	2-Methylphenol	mg/kg	500	NS	NS	0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		0.18	U		
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS	0.26	U	NA		NA		NA		0.28	U	0.33		NA		NA		NA		0.26	U	NA		NA		0.26	U		
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.18	U	NA		NA		NA		0.19	U	0.18	U	NA		NA		NA		0.18	U	NA		NA		0.18	U		
	Pyridine	mg/kg	500	NS	NS	0.19	U	NA		NA		NA		0.21	U	0.2	U	NA		NA		NA		0.19	U	NA		NA		0.19	U		
	Total SVOCs	mg/kg	N/A	100	100	10.2		NA		NA		NA		140		424		NA		NA		NA		ND		NA		NA		NA		ND	
Pesticides																																	
	Delta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Lindane	mg/kg	0.003	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Alpha-BHC	mg/kg	50	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Beta-BHC	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Heptachlor	mg/kg	0.3	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Aldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Endrin	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Endrin ketone	mg/kg	10	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Dieldrin	mg/kg	0.08	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	4,4'-DDE	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	4,4'-DDD	mg/kg	8	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	4,4'-DDT	mg/kg	6	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Endosulfan I	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Endosulfan II	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Methoxychlor	mg/kg	200	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Chlordane	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
Herbicides																																	
	MCPP	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	MCPA	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Dalapon	mg/kg	1,000	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Dicamba	mg/kg	500	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	Dichloroprop	mg/kg	NS	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2,4-D	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2,4-DB	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2,4,5-T	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA	
PCB Aroclors																																	
	Aroclor-1016	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
	Aroclor-1221	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
	Aroclor-1232	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
	Aroclor-1242	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
	Aroclor-1248	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
	Aroclor-1254	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
	Aroclor-1260	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
	Aroclor-1262	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
	Aroclor-1268	mg/kg	1	NS	NS	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
	PCBs, Total	mg/kg	1	2	2	NA		0.035	U	NA		NA		NA		NA		0.0362	U	NA		NA		NA		0.0351	U	NA		NA		NA	
TPH																																	
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	52.7		NA		NA		NA		341		548		NA		NA		NA		34.7	U	NA		NA		NA		35.9	U
Metals, total																																	
	Antimony	mg/kg	20	NS	NS	NA		2.09	U	NA		NA		NA		NA		2.18	U	NA		NA		NA		2.08	U	NA		NA		NA	
	Arsenic	mg/kg	20	40	40	NA		8.05		NA		NA		NA		NA		4.94		NA		NA		NA		5.05		NA		NA		NA	
	Barium	mg/kg	1,000	NS	NS	NA		23.7		NA		NA		NA		NA		17.0		NA		NA		NA		23.3		NA		NA		NA	
	Beryllium	mg/kg	90	NS	NS	NA		0.209	U	NA		NA		NA		NA		0.218	U	NA		NA		NA		0.208	U	NA		NA			

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-606A	GLX-TPW-607			GLX-TPW-607A		GLX-TPW-608			GLX-TPW-608A	GLX-TPW-609			GLX-TPW-609A
						0-5 ft	0-5 ft	0-2/0.6 ft	2-5/4.6 ft	0-5 ft	0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	0-5 ft
						02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	02/08/2020	11/02/2019	11/02/2019	11/02/2019	02/08/2020	11/02/2019	11/02/2019	11/02/2019	02/08/2020
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**						Field Dup								
	Vanadium	mg/kg	400	NS	NS	NA	21.9	NA	NA	NA	NA	12.4	NA	NA	NA	20.3	NA	NA	NA
	Zinc	mg/kg	1,000	NS	NS	NA	99.7	NA	NA	NA	NA	26.9	NA	NA	NA	40.6	NA	NA	NA

TABLE 2
Additional Characterization Soil Ananalytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^:						GLX-TPW-606A	GLX-TPW-607				GLX-TPW-607A				GLX-TPW-608						GLX-TPW-608A	GLX-TPW-609						GLX-TPW-609A	
Sample Date:						02/08/2020	0-5 ft	0-2/0.6 ft	2-5/4.6 ft	02/08/2020	0-5 ft	0-5 ft	02/08/2020	0-5 ft	0-2/1 ft	2-5/4 ft	02/08/2020	0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	02/08/2020	0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	02/08/2020		
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**							Field Dup																	
Metals, TCLP																													
	Lead	mg/L	5*	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA			
General Chemistry																													
	Ignitability	none	NS	NS	NS	NI		NA		NA		NI		NA		NA		NI		NA		NA		NA		NI			
	Specific conductance	umhos/cm	NS	4,000	8,000	10		NA		NA		12		13		NA		NA		10	U	NA		NA		10	U		
	pH	su	NS	>2 <12.5	>2 <12.5	7.6		NA		7.8		6.8		7.2		NA		7.0		6.3		7.5		NA		7.1		7.5	
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U	NA		NA		10	U	10	U	NA		NA		10	U	NA		NA		NA		10	U
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U	NA		NA		10	U	10	U	NA		NA		10	U	NA		NA		NA		10	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-610								GLX-TPW-610A		GLX-TPW-611						GLX-TPW-611A		GLX-TPW-612						GLX-TPW-612A		GLX-TPW-613					
						0-8 ft		0-2/1 ft		2-5/3 ft		5-8/7 ft		0-5 ft		0-5 ft		0-2/1.5 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1.5 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1.5 ft		2-5/4 ft	
						11/02/2019		11/02/2019		11/02/2019		11/02/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																																
VOCs																																					
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.0038	U	0.0024	U	0.0030	U	NA		NA		0.0049	U	0.0037	U	NA		NA		0.0042	U	0.0038	U	NA		NA		0.0034	U	0.0049	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.0011	U	0.00071	U	0.00091	U	NA		NA		0.0015	U	0.0011	U	NA		NA		0.0013	U	0.0011	U	NA		NA		0.0010	U	0.0015	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.00038	U	0.00024	U	0.00030	U	NA		NA		0.00049	U	0.00037	U	NA		NA		0.00042	U	0.00038	U	NA		NA		0.00034	U	0.00049	U
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.00038	U	0.00024	U	0.00030	U	NA		NA		0.00049	U	0.00037	U	NA		NA		0.00042	U	0.00038	U	NA		NA		0.00034	U	0.00049	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.003	U	0.0019	U	0.0024	U	NA		NA		0.0039	U	0.0030	U	NA		NA		0.0034	U	0.0030	U	NA		NA		0.0027	U	0.0039	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.00038	U	0.00024	U	0.00030	U	NA		NA		0.00049	U	0.00037	U	NA		NA		0.00042	U	0.00038	U	NA		NA		0.00034	U	0.00049	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.00038	U	0.00024	U	0.00030	U	NA		NA		0.00049	U	0.00037	U	NA		NA		0.00042	U	0.00038	U	NA		NA		0.00034	U	0.00049	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00038	U	0.00024	U	0.00030	U	NA		NA		0.00049	U	0.00037	U	NA		NA		0.00042	U	0.00038	U	NA		NA		0.00034	U	0.00049	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.00038	U	0.00024	U	0.00030	U	NA		NA		0.00049	U	0.00037	U	NA		NA		0.00042	U	0.00038	U	NA		NA		0.00034	U	0.00049	U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00038	U	0.00024	U	0.00030	U	NA		NA		0.00049	U	0.00037	U	NA		NA		0.00042	U	0.00038	U	NA		NA		0.00034	U	0.00049	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.003	U	0.0019	U	0.0024	U	NA		NA		0.0039	U	0.0030	U	NA		NA		0.0034	U	0.0030	U	NA		NA		0.0027	U	0.0039	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.00038	U	0.00024	U	0.00030	U	NA		NA		0.00049	U	0.00037	U	NA		NA		0.00042	U	0.00038	U	NA		NA		0.00034	U	0.00049	U
	Benzene	mg/kg	2	NS	NS	NA		0.00038	U	0.00024	U	0.00030	U	NA		NA		0.00049	U	0.00037	U	NA		NA		0.00042	U	0.00038	U	NA		NA		0.00034	U	0.00049	U
	Toluene	mg/kg	30	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	Chloromethane	mg/kg	100	NS	NS	NA		0.003	U	0.0019	U	0.0024	U	NA		NA		0.0039	U	0.0030	U	NA		NA		0.0034	U	0.0030	U	NA		NA		0.0027	U	0.0039	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.00076	U	0.00048	U	0.00061																									

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-610				GLX-TPW-610A	GLX-TPW-611				GLX-TPW-611A	GLX-TPW-612				GLX-TPW-612A	GLX-TPW-613																
						0-8 ft	0-2/1 ft		2-5/3 ft	5-8/7 ft	0-5 ft	0-5 ft		0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft		0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft		0-2/1.5 ft	2-5/4 ft												
						11/02/2019	11/02/2019		11/02/2019	11/02/2019	02/08/2020	10/20/2019		10/20/2019	10/20/2019	02/08/2020	10/20/2019		10/20/2019	10/20/2019	02/08/2020	10/20/2019		10/20/2019	10/20/2019												
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																																
	Naphthalene	mg/kg	4	NS	NS	NA		0.003	U	0.0019	U	0.0024	U	NA		NA		0.0039	U	0.0030	U	NA		NA		0.0034	U	0.0030	U	NA		NA		0.0027	U	0.0039	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.00076	U	0.00048	U	0.00061	U	NA		NA		0.00098	U	0.00074	U	NA		NA		0.00084	U	0.00076	U	NA		NA		0.00068	U	0.00098	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	Ethyl ether	mg/kg	100	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	Isopropyl Ether	mg/kg	100	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0015	U	0.00095	U	0.0012	U	NA		NA		0.0020	U	0.0015	U	NA		NA		0.0017	U	0.0015	U	NA		NA		0.0014	U	0.0020	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.061	U	0.038	U	0.049	U	NA		NA		0.078	U	0.06	U	NA		NA		0.067	U	0.06	U	NA		NA		0.054	U	0.078	U
	Total VOCs	mg/kg	N/A	4	10	NA		0.198		0.018		0.035		NA		NA		0.095		0.028		NA		NA		0.080		0.059		NA		NA		0.028		0.032	
SVOCs																																					
	Acenaphthene	mg/kg	4	NS	NS	NA		NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA		0.14	U	NA		NA		NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA	
	Azobenzene	mg/kg	NS	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA	
	Fluoranthene	mg/kg	1,000	NS	NS	NA		NA		NA		NA		0.1	U	NA		NA		NA		0.14	U	NA		NA		NA		0.11	U	NA		NA		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	NA		NA		NA		NA		0.073	U	NA		NA		NA		0.074	U	NA		NA		NA		0.075	U	NA		NA		NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	NA		NA		NA		NA		0.19	U	NA		NA		NA		0.19	U	NA		NA		NA		0.19	U	NA		NA		NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		NA		NA		NA		0.17	U	NA		NA		NA		0.18	U	NA		NA		NA		0.18	U	NA		NA		NA	

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-610				GLX-TPW-610A	GLX-TPW-611			GLX-TPW-611A	GLX-TPW-612			GLX-TPW-612A	GLX-TPW-613		
						0-8 ft	0-2/1 ft	2-5/3 ft	5-8/7 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft
						11/02/2019	11/02/2019	11/02/2019	11/02/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																
	2,4-Dinitrophenol	mg/kg	3	NS	NS	NA	NA	NA	NA	0.84 U	NA	NA	NA	0.85 U	NA	NA	NA	0.85 U	NA	NA	NA
	Pentachlorophenol	mg/kg	3	NS	NS	NA	NA	NA	NA	0.35 U	NA	NA	NA	0.35 U	NA	NA	NA	0.36 U	NA	NA	NA
	Phenol	mg/kg	1	NS	NS	NA	NA	NA	NA	0.17 U	NA	NA	NA	0.18 U	NA	NA	NA	0.18 U	NA	NA	NA
	2-Methylphenol	mg/kg	500	NS	NS	NA	NA	NA	NA	0.17 U	NA	NA	NA	0.18 U	NA	NA	NA	0.18 U	NA	NA	NA
	3-Methylphenol/4-Methylphenol	mg/kg	NS	NS	NS	NA	NA	NA	NA	0.25 U	NA	NA	NA	0.26 U	NA	NA	NA	0.26 U	NA	NA	NA
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	NA	NA	NA	NA	0.17 U	NA	NA	NA	0.18 U	NA	NA	NA	0.18 U	NA	NA	NA
	Pyridine	mg/kg	500	NS	NS	NA	NA	NA	NA	0.19 U	NA	NA	NA	0.19 U	NA	NA	NA	0.19 U	NA	NA	NA
	Total SVOCs	mg/kg	N/A	100	100	NA	NA	NA	NA	ND	NA	NA	NA	0.250	NA	NA	NA	ND	NA	NA	NA
Pesticides																					
	Delta-BHC	mg/kg	10	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Lindane	mg/kg	0.003	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Alpha-BHC	mg/kg	50	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Beta-BHC	mg/kg	10	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Heptachlor	mg/kg	0.3	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aldrin	mg/kg	0.08	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endrin	mg/kg	10	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endrin ketone	mg/kg	10	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dieldrin	mg/kg	0.08	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4,4'-DDE	mg/kg	6	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4,4'-DDD	mg/kg	8	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	4,4'-DDT	mg/kg	6	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endosulfan I	mg/kg	0.5	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endosulfan II	mg/kg	0.5	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Methoxychlor	mg/kg	200	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Chlordane	mg/kg	0.7	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Herbicides																					
	MCPP	mg/kg	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MCPA	mg/kg	100	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dalapon	mg/kg	1,000	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dicamba	mg/kg	500	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dichloroprop	mg/kg	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4-D	mg/kg	100	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4-DB	mg/kg	100	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4,5-T	mg/kg	100	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB Aroclors																					
	Aroclor-1016	mg/kg	1	NS	NS	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
	Aroclor-1221	mg/kg	1	NS	NS	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
	Aroclor-1232	mg/kg	1	NS	NS	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
	Aroclor-1242	mg/kg	1	NS	NS	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
	Aroclor-1248	mg/kg	1	NS	NS	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
	Aroclor-1254	mg/kg	1	NS	NS	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
	Aroclor-1260	mg/kg	1	NS	NS	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
	Aroclor-1262	mg/kg	1	NS	NS	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
	Aroclor-1268	mg/kg	1	NS	NS	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
	PCBs, Total	mg/kg	1	2	2	0.0350	NA	NA	NA	NA	NA	0.036	NA	NA	0.035	NA	NA	NA	NA	0.037	NA
TPH																					
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	NA	NA	NA	NA	34.1	NA	NA	NA	35.1	NA	NA	NA	35.3	NA	NA	NA
Metals, total																					
	Antimony	mg/kg	20	NS	NS	2.12	NA	NA	NA	NA	NA	2.17	NA	NA	2.07	NA	NA	NA	NA	2.15	NA
	Arsenic	mg/kg	20	40	40	3.85	NA	NA	NA	NA	NA	3.56	NA	NA	2.90	NA	NA	NA	NA	2.18	NA
	Barium	mg/kg	1,000	NS	NS	20.4	NA	NA	NA	NA	NA	29.6	NA	NA	14.8	NA	NA	NA	NA	25.6	NA
	Beryllium	mg/kg	90	NS	NS	0.212	NA	NA	NA	NA	NA	0.217	NA	NA	0.207	NA	NA	NA	NA	0.215	NA
	Cadmium	mg/kg	70	30	80	0.425	NA	NA	NA	NA	NA	0.433	NA	NA	0.414	NA	NA	NA	NA	0.431	NA
	Chromium	mg/kg	100	1,000	1,000	12.7	NA	NA	NA	NA	NA	11.3	NA	NA	16.6	NA	NA	NA	NA	13.8	NA
	Lead	mg/kg	200	1,000	2,000	17.9	NA	NA	NA	NA	NA	58.6	NA	NA	8.80	NA	NA	NA	NA	9.52	NA
	Mercury	mg/kg	20	10	10	NA	NA	NA	NA	0.078	NA	NA	NA	0.078	NA	NA	NA	0.079	NA	NA	NA
	Nickel	mg/kg	600	NS	NS	7.43	NA	NA	NA	NA	NA	9.82	NA	NA	9.84	NA	NA	NA	NA	10.0	NA
	Selenium	mg/kg	400	NS	NS	2.12	NA	NA	NA	NA	NA	2.17	NA	NA	2.07	NA	NA	NA	NA	2.15	NA
	Silver	mg/kg	100	NS	NS	0.425	NA	NA	NA	NA	NA	0.433	NA	NA	0.414	NA	NA	NA	NA	0.431	NA
	Thallium	mg/kg	8	NS	NS	2.12	NA	NA	NA	NA	NA	2.17	NA	NA	2.07	NA	NA	NA	NA	2.15	NA

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-610				GLX-TPW-610A	GLX-TPW-611			GLX-TPW-611A	GLX-TPW-612			GLX-TPW-612A	GLX-TPW-613		
						0-8 ft	0-2/1 ft	2-5/3 ft	5-8/7 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft	0-5 ft	0-5 ft	0-2/1.5 ft	2-5/4 ft
						11/02/2019	11/02/2019	11/02/2019	11/02/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																
	Vanadium	mg/kg	400	NS	NS	20.5	NA	NA	NA	NA	NA	23.6	NA	NA	21.1	NA	NA	NA	NA	20.5	NA
	Zinc	mg/kg	1,000	NS	NS	35.6	NA	NA	NA	NA	NA	51.7	NA	NA	36.1	NA	NA	NA	NA	45.8	NA

TABLE 2
Additional Characterization Soil Ananalytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-610								GLX-TPW-610A		GLX-TPW-611						GLX-TPW-611A		GLX-TPW-612						GLX-TPW-612A		GLX-TPW-613					
						0-8 ft		0-2/1 ft		2-5/3 ft		5-8/7 ft		0-5 ft		0-5 ft		0-2/1.5 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1.5 ft		2-5/4 ft		0-5 ft		0-5 ft		0-2/1.5 ft		2-5/4 ft	
						11/02/2019		11/02/2019		11/02/2019		11/02/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019	
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																																
Metals, TCLP																																					
	Lead	mg/L	5*	NS	NS	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA					
General Chemistry																																					
	Ignitability	none	NS	NS	NS	NA		NA		NA		NI		NA		NA		NA		NI		NA		NA		NA		NI		NA		NA		NA			
	Specific conductance	umhos/cm	NS	4,000	8,000	NA		NA		NA		10	U	NA		NA		NA		10	U	NA		NA		10	U	NA		NA		NA		NA			
	pH	su	NS	>2 <12.5	>2 <12.5	NA		7.2		7.5		7.3		NA		7.0		6.5		6.5		NA		4.0		6.6		7.3		NA		7.1		6.1			
	Reactive Cyanide	mg/kg	NS	< 250	< 250	NA		NA		NA		10	U	NA		NA		NA		10	U	NA		NA		NA		10	U	NA		NA		NA			
	Reactive Sulfide	mg/kg	NS	< 500	< 500	NA		NA		NA		10	U	NA		NA		NA		10	U	NA		NA		NA		10	U	NA		NA		NA			

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-613A		GLX-TPW-614					GLX-TPW-614A		GLX-TPW-615						WASH-C15DS		WASH-NABUTDS								
								0-5 ft	0-2/1 ft	2-5/4 ft	4 ft	0-5 ft			0-15 ft	1 ft	2-5/4 ft	5-8/7 ft	8-12/10 ft	12-15/13 ft	N/A	5 ft	N/A	3 ft							
						02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	03/19/2020	03/19/2020	03/20/2020	03/20/2020											
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**	Field Dup																									
VOCs																															
	Methylene chloride	mg/kg	0.1	NS	NS	NA	NA	0.0043	U	0.0035	U	0.0039	U	NA	NA	0.0041	U	0.0033	U	0.0036	U	0.0037	U	0.0034	U	NA	0.0038	U	NA	0.0041	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	Chloroform	mg/kg	0.2	NS	NS	NA	NA	0.0013	U	0.0010	U	0.0012	U	NA	NA	0.0012	U	0.00099	U	0.0011	U	0.0011	U	0.0010	U	NA	0.0012	U	NA	0.0012	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.0033		NA	0.0062	
	Chlorobenzene	mg/kg	1	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.00038	U	NA	0.00041	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA	NA	0.0034	U	0.0028	U	0.0031	U	NA	NA	0.0033	U	0.0026	U	0.0028	U	0.0030	U	0.0027	U	NA	0.0031	U	NA	0.0033	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.00038	U	NA	0.00041	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.00038	U	NA	0.00041	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.00038	U	NA	0.00041	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.00038	U	NA	0.00041	U
	1,1-Dichloropropene	mg/kg	0.01	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.00038	U	NA	0.00041	U
	Bromoform	mg/kg	0.1	NS	NS	NA	NA	0.0034	U	0.0028	U	0.0031	U	NA	NA	0.0033	U	0.0026	U	0.0028	U	0.0030	U	0.0027	U	NA	0.0031	U	NA	0.0033	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.00038	U	NA	0.00041	U
	Benzene	mg/kg	2	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.00038	U	NA	0.00041	U
	Toluene	mg/kg	30	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	Ethylbenzene	mg/kg	40	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	Chloromethane	mg/kg	100	NS	NS	NA	NA	0.0034	U	0.0028	U	0.0031	U	NA	NA	0.0033	U	0.0026	U	0.0028	U	0.0030	U	0.0027	U	NA	0.0031	U	NA	0.0033	U
	Bromomethane	mg/kg	0.5	NS	NS	NA	NA	0.0017	U	0.0014	U	0.0016	U	NA	NA	0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA	0.0015	U	NA	0.0016	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	Chloroethane	mg/kg	100	NS	NS	NA	NA	0.0017	U	0.0014	U	0.0016	U	NA	NA	0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA	0.0015	U	NA	0.0016	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA	NA	0.00085	U	0.00070	U	0.00078	U	NA	NA	0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA	0.00077	U	NA	0.00082	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA	NA	0.0013	U	0.0010	U	0.0012	U	NA	NA	0.0012	U	0.00099	U	0.0011	U	0.0011	U	0.0010	U	NA	0.0012	U	NA	0.0012	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA	NA	0.00043	U	0.00035	U	0.00039	U	NA	NA	0.00041	U	0.00033	U	0.00036	U	0.00037	U	0.00034	U	NA	0.00038	U	NA	0.00041	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA	NA	0.0017	U	0.0014	U	0.0016	U	NA	NA																

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-613A		GLX-TPW-614					GLX-TPW-614A		GLX-TPW-615								WASH-C15DS		WASH-NABUTDS												
						0-5 ft	0-5 ft	0-2/1 ft	2-5/4 ft	4 ft	0-5 ft	0-15 ft	1 ft	2-5/4 ft	5-8/7 ft	8-12/10 ft	12-15/13 ft	N/A	5 ft	N/A	3 ft																
						02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	02/08/2020	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	10/20/2019	03/19/2020	03/19/2020	03/20/2020	03/20/2020																
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**						Field Dup																										
	Naphthalene	mg/kg	4	NS	NS	NA		NA		0.0034	U	0.0028	U	0.0031	U	NA		NA		0.0033	U	0.0026	U	0.0028	U	0.0030	U	0.0027	U	NA		0.0031	U	NA		0.0033	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		NA		0.00085	U	0.00070	U	0.00078	U	NA		NA		0.00082	U	0.00066	U	0.00071	U	0.00075	U	0.00067	U	NA		0.00077	U	NA		0.00082	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	Ethyl ether	mg/kg	100	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	Isopropyl Ether	mg/kg	100	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		NA		0.0017	U	0.0014	U	0.0016	U	NA		NA		0.0016	U	0.0013	U	0.0014	U	0.0015	U	0.0013	U	NA		0.0015	U	NA		0.0016	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		NA		0.068	U	0.056	U	0.062	U	NA		NA		0.065	U	0.053	U	0.057	U	0.06	U	0.054	U	NA		0.062	U	NA		0.065	U
	Total VOCs	mg/kg	N/A	4	10	NA		NA		0.066		ND		0.052		NA		NA		ND		ND		0.036		0.062		0.021		NA		0.133		NA		0.0272	
SVOCs																																					
	Acenaphthene	mg/kg	4	NS	NS	0.14	U	NA		NA		NA		NA		0.14	U	NA		NA		NA		NA		NA		NA		0.15	U	NA		0.15	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Azobenzene	mg/kg	NS	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	0.14		NA		NA		NA		NA		0.12		NA		NA		NA		NA		NA		NA		0.53		NA		0.7		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.19	U	NA		NA		NA		NA		0.19	U	NA		NA		NA		NA		NA		NA		0.2	U	NA		0.21	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.17	U	NA		NA		NA		NA		0.18	U	NA		NA		NA		NA		NA		NA		0.18	U	NA		0.19	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.073	U	NA		NA		NA		NA		0.075	U	NA		NA		NA		NA		NA		NA		0.077	U	NA		0.081	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.16	U	NA		NA		NA		NA		0.16	U	NA		NA		NA		NA		NA		NA		0.16	U	NA		0.17	U	NA	
	Naphthalene	mg/kg																																			

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-613A		GLX-TPW-614					GLX-TPW-614A		GLX-TPW-615							WASH-C15DS		WASH-NABUTDS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
						0-5 ft		02/08/2020		10/20/2019		10/20/2019		10/20/2019		4 ft		10/20/2019		0-5 ft		02/08/2020		10-15 ft		1 ft		10/20/2019		2-5/4 ft		5-8/7 ft		8-12/10 ft		12-15/13 ft		10/20/2019		N/A		5 ft		03/19/2020		03/19/2020		N/A		3 ft		03/20/2020		03/20/2020																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														</

TABLE 2
Additional Characterization Soil Analytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-613A	GLX-TPW-614				GLX-TPW-614A	GLX-TPW-615						WASH-C15DS		WASH-NABUTDS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
							Analysis	Analyte	Sample Location:	RCS-1		Unlined Landfill**	Lined Landfill**	0-5 ft	02/08/2020	0-5 ft	10/20/2019	0-2/1 ft	10/20/2019	2-5/4 ft	10/20/2019	4 ft	10/20/2019	0-5 ft	02/08/2020	0-15 ft	10/20/2019	1 ft	10/20/2019	2-5/4 ft	10/20/2019	5-8/7 ft	10/20/2019	8-12/10 ft	10/20/2019	12-15/13 ft	10/20/2019	N/A	03/19/2020	5 ft	03/19/2020	N/A	03/20/2020	3 ft	03/20/2020																																																																																																																																																																																																																																																																																																																																																																																																																																																																													

TABLE 2
Additional Characterization Soil Ananalytical Results
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth: Sample Date:						GLX-TPW-613A 0-5 ft		GLX-TPW-614						GLX-TPW-614A 0-5 ft		GLX-TPW-615								WASH-C15DS				WASH-NABUTDS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
								0-5 ft		0-2/1 ft		2-5/4 ft				4 ft		0-15 ft		1 ft		2-5/4 ft		5-8/7 ft		8-12/10 ft		12-15/13 ft		N/A		5 ft		N/A		3 ft																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
						02/08/2020						10/20/2019		10/20/2019		10/20/2019		10/20/2019		02/08/2020		10/20/2019		10/20/2019		10/20/2019		10/20/2019		03/19/2020		03/19/2020		03/20/2020		03/20/2020																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
Analysis	Analyte	Sample Location:	RCS-1	Unlined Landfill**	Lined Landfill**	Field Dup																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

I - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD (relative percent difference) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type are equal to RCS-1 or exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

TCLP - Toxicity Characteristic Leaching Procedure.

RC - Reportable concentration.

* - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-413			GLX-TPW-414
						2 ft 4/6/2020	2 ft 4/6/2020	10 ft 4/6/2020	3 ft 4/15/2020
Analysis	Analyte	Unit	S-1/GW-1	S-1/GW-2	S-1/GW-3	Low VOC	High VOC		
VOCs									
	Methylene chloride	mg/kg	0.1	4	400	0.0066 U	0.4 U	0.003 U	0.0041 U
	1,1-Dichloroethane	mg/kg	0.4	9	500	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Chloroform	mg/kg	0.4	0.2	500	0.002 U	0.12 U	0.00089 U	0.0012 U
	Carbon tetrachloride	mg/kg	10	5	30	0.0013 U	0.081 U	0.0006 U	0.00082 U
	1,2-Dichloropropane	mg/kg	0.1	0.1	30	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Dibromochloromethane	mg/kg	0.005	0.03	20	0.0013 U	0.081 U	0.0006 U	0.00082 U
	1,1,2-Trichloroethane	mg/kg	0.1	2	40	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Tetrachloroethene	mg/kg	1	10	30	0.0054	0.21	0.0033	0.00041 U
	Chlorobenzene	mg/kg	1	3	100	0.00066 U	0.04 U	0.0003 U	0.00041 U
	Trichlorofluoromethane	mg/kg	NS	NS	NS	0.0052 U	0.32 U	0.0024 U	0.0033 U
	1,2-Dichloroethane	mg/kg	0.1	0.1	20	0.0013 U	0.081 U	0.0006 U	0.00082 U
	1,1,1-Trichloroethane	mg/kg	30	500	500	0.00066 U	0.04 U	0.0003 U	0.00041 U
	Bromodichloromethane	mg/kg	0.1	0.1	30	0.00066 U	0.04 U	0.0003 U	0.00041 U
	trans-1,3-Dichloropropene	mg/kg	0.01(2)	0.4(2)	20(2)	0.0013 U	0.081 U	0.0006 U	0.00082 U
	cis-1,3-Dichloropropene	mg/kg	0.01(2)	0.4(2)	20(2)	0.00066 U	0.04 U	0.0003 U	0.00041 U
	1,3-Dichloropropene, Total	mg/kg	0.01	0.4	20	0.00066 U	0.04 U	0.0003 U	0.00041 U
	1,1-Dichloropropene	mg/kg	NS	NS	NS	0.00066 U	0.04 U	0.0003 U	0.00041 U
	Bromoform	mg/kg	0.1	1	300	0.0052 U	0.32 U	0.0024 U	0.0033 U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	0.02	10	0.00066 U	0.04 U	0.0003 U	0.00041 U
	Benzene	mg/kg	2	40	40	0.00066 U	0.04 U	0.0003 U	0.00041 U
	Toluene	mg/kg	30	500	500	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Ethylbenzene	mg/kg	40	500	500	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Chloromethane	mg/kg	NS	NS	NS	0.0052 U	0.32 U	0.0024 U	0.0033 U
	Bromomethane	mg/kg	0.5	0.5	30	0.0026 U	0.16 U	0.0012 U	0.0016 U
	Vinyl chloride	mg/kg	0.9	0.7	1	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Chloroethane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,1-Dichloroethene	mg/kg	3	40	500	0.0013 U	0.081 U	0.0006 U	0.00082 U
	trans-1,2-Dichloroethene	mg/kg	1	1	500	0.002 U	0.12 U	0.00089 U	0.0012 U
	Trichloroethene	mg/kg	0.3	0.3	30	0.00066 U	0.04 U	0.0003 U	0.00041 U
	1,2-Dichlorobenzene	mg/kg	9	100	300	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,3-Dichlorobenzene	mg/kg	3	100	100	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,4-Dichlorobenzene	mg/kg	0.7	1	80	0.0026 U	0.16 U	0.0012 U	0.0016 U
	Methyl tert butyl ether	mg/kg	0.1	100	100	0.0026 U	0.16 U	0.0012 U	0.0016 U
	p/m-Xylene	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	o-Xylene	mg/kg	NS	NS	NS	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Xylenes (Total)	mg/kg	400	100	500	0.0013 U	0.081 U	0.0006 U	0.00082 U
	cis-1,2-Dichloroethene	mg/kg	0.3	0.1	100	0.0013 U	0.081 U	0.0006 U	0.00082 U
	1,2-Dichloroethene (total)	mg/kg	NS	NS	NS	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Dibromomethane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,2,3-Trichloropropane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	Styrene	mg/kg	3	4	70	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Dichlorodifluoromethane	mg/kg	NS	NS	NS	0.013 U	0.81 U	0.006 U	0.0082 U
	Acetone	mg/kg	6	50	400	0.48 E	0.81 U	0.066	0.03
	Carbon disulfide	mg/kg	NS	NS	NS	0.013 U	0.81 U	0.006 U	0.0082 U
	2-Butanone	mg/kg	4	50	400	0.013 U	0.81 U	0.006 U	0.0082 U
	4-Methyl-2-pentanone	mg/kg	0.4	50	400	0.013 U	0.81 U	0.006 U	0.0082 U
	2-Hexanone	mg/kg	NS	NS	NS	0.013 U	0.81 U	0.006 U	0.0082 U
	Bromochloromethane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	Tetrahydrofuran	mg/kg	NS	NS	NS	0.0052 U	0.32 U	0.0024 U	0.0033 U
	2,2-Dichloropropane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,2-Dibromoethane	mg/kg	0.1	0.1	1	0.0013 U	0.081 U	0.0006 U	0.00082 U
	1,3-Dichloropropane	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	0.1	80	0.00066 U	0.04 U	0.0003 U	0.00041 U
	Bromobenzene	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	n-Butylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0013 U	0.081 U	0.0006 U	0.00082 U
	sec-Butylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0013 U	0.081 U	0.0006 U	0.00082 U
	tert-Butylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0026 U	0.16 U	0.0012 U	0.0016 U
	o-Chlorotoluene	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	p-Chlorotoluene	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location: Sample Depth^: Sample Date:						GLX-TPW-413			GLX-TPW-414
						2 ft 4/6/2020	2 ft 4/6/2020	10 ft 4/6/2020	3 ft 4/15/2020
Analysis	Analyte	Unit	S-1/GW-1	S-1/GW-2	S-1/GW-3	Low VOC	High VOC		
	1,2-Dibromo-3-chloropropane	mg/kg	NS	NS	NS	0.0039 U	0.24 U	0.0018 U	0.0024 U
	Hexachlorobutadiene	mg/kg	30	30	30	0.0052 U	0.32 U	0.0024 U	0.0033 U
	Isopropylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0013 U	0.081 U	0.0006 U	0.00082 U
	p-Isopropyltoluene	mg/kg	100(1)	100(1)	100(1)	0.0013 U	0.081 U	0.0006 U	0.00082 U
	Naphthalene	mg/kg	4	20	500	0.0052 U	0.32 U	0.0024 U	0.0033 U
	n-Propylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0013 U	0.081 U	0.0006 U	0.00082 U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,2,4-Trichlorobenzene	mg/kg	2	6	700	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,3,5-Trimethylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,2,4-Trimethylbenzene	mg/kg	100(1)	100(1)	100(1)	0.0026 U	0.16 U	0.0012 U	0.0016 U
	Ethyl ether	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	Isopropyl Ether	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	0.0026 U	0.16 U	0.0012 U	0.0016 U
	1,4-Dioxane	mg/kg	0.2	6	20	0.1 U	6.4 U	0.048 U	0.065 U

Notes:
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
E - Value exceeds calibration range.
N/A - Not applicable.
NS - No MassDEP standards exist for this analyte.
U - Analyte was not detected at specified quantitation limit.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed one or more of the listed standards/criteria.
VOCs - Volatile Organic Compounds.
^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location:						GLX-TPW-413					
Lab Sample ID: Sample Depth^: Sample Date:						L2014666-02 2 ft 4/6/2020		L2016435-01/ L2014666-01/ L2014666-02 0-5/2 ft 4/6/2020		L2016435-02/ L2014666-03/ L2014666-04 5-10/10 ft 4/6/2020	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*	Low VOC		High VOC			
SVOCs	Acenaphthene	mg/kg	4	NS	NS	NA		0.16	U	0.15	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.2	U	0.19	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	NA		0.2	U	0.19	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.2	U	0.19	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.2	U	0.19	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	NA		0.2	U	0.19	U
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	NA		0.2	U	0.19	U
	Azobenzene	mg/kg	NS	NS	NS	NA		0.2	U	0.19	U
	Fluoranthene	mg/kg	1,000	NS	NS	NA		0.28		0.11	U
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	NA		0.2	U	0.19	U
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	NA		0.21	U	0.2	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.2	U	0.19	U
	Hexachloroethane	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	Isophorone	mg/kg	100	NS	NS	NA		0.18	U	0.17	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.2	U	0.19	U
	Nitrobenzene	mg/kg	500	NS	NS	NA		0.18	U	0.17	U
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	NA		0.2	U	0.19	U
	Butyl benzyl phthalate	mg/kg	100	NS	NS	NA		0.2	U	0.19	U
	Di-n-butylphthalate	mg/kg	50	NS	NS	NA		0.2	U	0.19	U
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	NA		0.2	U	0.19	U
	Diethyl phthalate	mg/kg	10	NS	NS	NA		0.2	U	0.19	U
	Dimethyl phthalate	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	Benzo(a)anthracene	mg/kg	7	NS	NS	NA		0.14		0.11	U
	Benzo(a)pyrene	mg/kg	2	NS	NS	NA		0.16		0.15	U
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	NA		0.19		0.11	U
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	NA		0.12	U	0.11	U
	Chrysene	mg/kg	70	NS	NS	NA		0.15		0.11	U
	Acenaphthylene	mg/kg	1	NS	NS	NA		0.16	U	0.15	U
	Anthracene	mg/kg	1,000	NS	NS	NA		0.12	U	0.11	U
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	NA		0.16	U	0.15	U
	Fluorene	mg/kg	1,000	NS	NS	NA		0.2	U	0.19	U
	Phenanthrene	mg/kg	10	NS	NS	NA		0.16		0.11	U
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS	NA		0.16	U	0.15	U
	Pyrene	mg/kg	1,000	NS	NS	NA		0.26		0.11	U
	Aniline	mg/kg	1,000	NS	NS	NA		0.24	U	0.22	U
	4-Chloroaniline	mg/kg	1	NS	NS	NA		0.2	U	0.19	U
	Dibenzofuran	mg/kg	100	NS	NS	NA		0.2	U	0.19	U
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	Acetophenone	mg/kg	1,000	NS	NS	NA		0.2	U	0.19	U
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	2-Chlorophenol	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	NA		0.083	U	0.079	U
	2-Nitrophenol	mg/kg	100	NS	NS	NA		0.43	U	0.4	U
	4-Nitrophenol	mg/kg	100	NS	NS	NA		0.28	U	0.26	U
	2,4-Dinitrophenol	mg/kg	3	NS	NS	NA		0.95	U	0.9	U
	Pentachlorophenol	mg/kg	3	NS	NS	NA		0.4	U	0.38	U
	Phenol	mg/kg	1	NS	NS	NA		0.2	U	0.19	U
	2-Methylphenol	mg/kg	500	NS	NS	NA		0.2	U	0.19	U
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	NA		0.28	U	0.27	U
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	NA		0.2	U	0.19	U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location:						GLX-TPW-413					
Lab Sample ID: Sample Depth^: Sample Date:						L2014666-02 2 ft 4/6/2020	L2016435-01/ L2014666-01/ L2014666-02 0-5/2 ft 4/6/2020	L2016435-02/ L2014666-03/ L2014666-04 5-10/10 ft 4/6/2020			
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*	Low VOC	High VOC				
	Pyridine	mg/kg	500	NS	NS	NA	0.21	U	0.2	U	
	Total SVOCs	mg/kg	N/A	100	100	NA	1.34		ND		
Pesticides											
	Delta-BHC	mg/kg	10	NS	NS	NA	0.00190	U	0.00171	U	
	Lindane	mg/kg	0.003	NS	NS	NA	0.000634	U	0.000569	U	
	Alpha-BHC	mg/kg	50	NS	NS	NA	0.000792	U	0.000711	U	
	Beta-BHC	mg/kg	10	NS	NS	NA	0.00190	U	0.00171	U	
	Heptachlor	mg/kg	0.3	NS	NS	NA	0.000951	U	0.000853	U	
	Aldrin	mg/kg	0.08	NS	NS	NA	0.00190	U	0.00171	U	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	NA	0.00356	U	0.00320	U	
	Endrin	mg/kg	10	NS	NS	NA	0.000792	U	0.000711	U	
	Endrin ketone	mg/kg	NS	NS	NS	NA	0.00190	U	0.00171	U	
	Dieldrin	mg/kg	0.08	NS	NS	NA	0.00119	U	0.00107	U	
	4,4'-DDE	mg/kg	6	NS	NS	NA	0.00190	U	0.00171	U	
	4,4'-DDD	mg/kg	8	NS	NS	NA	0.00190	U	0.00171	U	
	4,4'-DDT	mg/kg	6	NS	NS	NA	0.0137		0.00320	U	
	Endosulfan I	mg/kg	0.5	NS	NS	NA	0.00190	U	0.00171	U	
	Endosulfan II	mg/kg	0.5	NS	NS	NA	0.00190	U	0.00171	U	
	Endosulfan sulfate	mg/kg	0.5	NS	NS	NA	0.000792	U	0.000711	U	
	Methoxychlor	mg/kg	200	NS	NS	NA	0.00356	U	0.00320	U	
	Chlordane	mg/kg	0.7	NS	NS	NA	0.0158	U	0.0142	U	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NA	0.00190	U	0.00171	U	
Herbicides											
	MCPP	mg/kg	NS	NS	NS	NA	4	U	3.7	U	
	MCPA	mg/kg	100	NS	NS	NA	4	U	3.7	U	
	Dalapon	mg/kg	1,000	NS	NS	NA	0.04	U	0.037	U	
	Dicamba	mg/kg	500	NS	NS	NA	0.04	U	0.037	U	
	Dichloroprop	mg/kg	NS	NS	NS	NA	0.04	U	0.037	U	
	2,4-D	mg/kg	100	NS	NS	NA	0.04	U	0.037	U	
	2,4-DB	mg/kg	100	NS	NS	NA	0.04	U	0.037	U	
	2,4,5-T	mg/kg	100	NS	NS	NA	0.04	U	0.037	U	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	NA	0.04	U	0.037	U	
PCB Aroclors											
	Aroclor-1016	mg/kg	1	NS	NS	NA	0.0396	U	0.0364	U	
	Aroclor-1221	mg/kg	1	NS	NS	NA	0.0396	U	0.0364	U	
	Aroclor-1232	mg/kg	1	NS	NS	NA	0.0396	U	0.0364	U	
	Aroclor-1242	mg/kg	1	NS	NS	NA	0.0396	U	0.0364	U	
	Aroclor-1248	mg/kg	1	NS	NS	NA	0.0396	U	0.0364	U	
	Aroclor-1254	mg/kg	1	NS	NS	NA	0.0396	U	0.0364	U	
	Aroclor-1260	mg/kg	1	NS	NS	NA	0.0396	U	0.0364	U	
	Aroclor-1262	mg/kg	1	NS	NS	NA	0.0396	U	0.0364	U	
	Aroclor-1268	mg/kg	1	NS	NS	NA	0.0396	U	0.0364	U	
	PCBs, Total	mg/kg	1	2	2	NA	0.0396	U	0.0364	U	
TPH											
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	NA	39.4	U	36.7	U	
Metals, total											
	Arsenic	mg/kg	20	40	40	NA	8.37		5.91		
	Barium	mg/kg	1,000	NS	NS	NA	53.8		71.5		
	Cadmium	mg/kg	70	30	80	NA	0.458	U	0.442	U	
	Chromium	mg/kg	100	1,000	1,000	NA	24.2		37.2		
	Lead	mg/kg	200	1,000	2,000	NA	54.2		7.39		
	Mercury	mg/kg	20	10	10	NA	0.118		0.083	U	
	Selenium	mg/kg	400	NS	NS	NA	2.29	U	2.21	U	
	Silver	mg/kg	100	NS	NS	NA	0.458	U	0.442	U	
General Chemistry											
	Ignitability		NS	N/A	N/A	NA	NI		NI		
	Specific conductance	umhos/cm	NS	4,000	8,000	NA	47		21		
	pH	su	NS	>2 <12.5	>2 <12.5	NA	7.6		7.9		

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

Sample Location:						GLX-TPW-413					
Lab Sample ID:						L2014666-02		L2016435-01/		L2016435-02/	
Sample Depth^:								L2014666-01/		L2014666-03/	
Sample Date:								L2014666-02		L2014666-04	
						2 ft		0-5/2 ft		5-10/10 ft	
						4/6/2020		4/6/2020		4/6/2020	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*	Low VOC		High VOC			
	Reactive Cyanide	mg/kg	NS	< 250	< 250	NA		10	U	10	U
	Reactive Sulfide	mg/kg	NS	< 500	< 500	NA		10	U	10	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

E - Value exceeds calibration range.

NA - Sample not analyzed for the listed analyte.

N/A - Not available/applicable.

ND - Not detected.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

RC - Reportable Concentration.

TPH - Total Petroleum Hydrocarbons.

* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

^ - Sample depth for other/VOCs analysis; otherwise for all the analyses.

(1) - MassDEP RC for C9-C10 aromatics used.

(2) - MassDEP RC for Dichloropropene used.

(3) - MassDEP RC for Dichloropropane used.

(4) - MassDEP RC for Chlorotoluene used.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION					WASH-MH212-DC-COMP		Wash-MH186-DC-Comp		
SAMPLING DATE					7/17/2020		08/07/2020		
LAB SAMPLE ID					20G1285-01		20H0388-01		
SAMPLE TYPE					SOIL		SOIL		
		CasNum	RCS-1-14	RCS-2-14	Units	Results	Qual	Results	Qual
General Chemistry									
	Specific Conductance @ 25 C	SC			umhos/cm	42		16	
	Solids, Total	TSOLIDS			%	96.1		91.5	
	pH (H)	12408-02-5			SU	4	U	7.7	
	Cyanide, Reactive	GIS-250-012			mg/kg	20	U	4	U
	Sulfide, Reactive	RSULF			mg/kg	8.9		20	U
Ignitability of Solids									
	Ignitability	IGNIT				Absent		Absent	
MCP Chlorinated Herbicides									
	2,4-D	94-75-7	100	1000	mg/kg	0.026	U	0.027	U
	2,4-DB	94-82-6	100	1000	mg/kg	0.026	U	0.027	U
	2,4,5-TP (Silvex)	93-72-1	100	1000	mg/kg	0.0026	U	0.0027	U
	2,4,5-T	93-76-5	100	1000	mg/kg	0.0026	U	0.0027	U
	Dalapon	75-99-0	1000	10000	mg/kg	0.064	U	0.067	U
	Dicamba	1918-00-9	500	5000	mg/kg	0.0026	U	0.0027	U
	Dichloroprop	120-36-5			mg/kg	0.026	U	0.027	U
	Dinoseb	88-85-7	500	5000	mg/kg	0.013	U	0.013	U
	MCPA	94-74-6	100	1000	mg/kg	2.6	U	2.7	U
	MCPP	93-65-2			mg/kg	2.6	U	2.7	U
MCP Organochlorine Pesticides									
	Aldrin	309-00-2	0.08	0.5	mg/kg	0.052	U	0.054	U
	Alpha-BHC	319-84-6	50	500	mg/kg	0.052	U	0.054	U
	Beta-BHC	319-85-7	10	100	mg/kg	0.052	U	0.054	U
	Delta-BHC	319-86-8	10	100	mg/kg	0.052	U	0.054	U
	Lindane	58-89-9	0.003	0.5	mg/kg	0.021	U	0.021	U
	Chlordane	57-74-9	0.7	30	mg/kg	0.21	U	0.21	U
	4,4'-DDD	72-54-8	8	40	mg/kg	0.042	U	0.043	U
	4,4'-DDE	72-55-9	6	30	mg/kg	0.042	U	0.043	U
	4,4'-DDT	50-29-3	6	30	mg/kg	0.21		0.043	U
	Dieldrin	60-57-1	0.08	0.5	mg/kg	0.042	U	0.043	U
	Endosulfan I	959-98-8	0.5	1	mg/kg	0.052	U	0.054	U
	Endosulfan II	33213-65-9	0.5	1	mg/kg	0.083	U	0.086	U
	Endosulfan sulfate	1031-07-8			mg/kg	0.083	U	0.086	U
	Endrin	72-20-8	10	20	mg/kg	0.083	U	0.086	U
	Endrin ketone	53494-70-5			mg/kg	0.083	U	0.086	U
	Heptachlor	76-44-8	0.3	2	mg/kg	0.052	U	0.054	U
	Heptachlor epoxide	1024-57-3	0.1	0.9	mg/kg	0.052	U	0.054	U
	Hexachlorobenzene	118-74-1	0.7	0.8	mg/kg	0.062	U	0.064	U
	Methoxychlor	72-43-5	200	400	mg/kg	0.52	U	0.54	U
MCP Polychlorinated Biphenyls									
	Aroclor 1016	12674-11-2	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1221	11104-28-2	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1232	11141-16-5	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1242	53469-21-9	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1248	12672-29-6	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1254	11097-69-1	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1260	11096-82-5	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1262	37324-23-5	1	4	mg/kg	0.081	U	0.087	U
	Aroclor 1268	11100-14-4	1	4	mg/kg	0.081	U	0.087	U
	PCBs, Total	1336-36-3	1	4	mg/kg	0.081	U	0.087	U
MCP Semivolatile Organics									
	Acenaphthene	83-32-9	4	3000	mg/kg	0.18	U	0.18	U
	Acenaphthylene	208-96-8	1	10	mg/kg	0.18	U	0.18	U
	Acetophenone	98-86-2	1000	10000	mg/kg	0.35	U	0.37	U
	Aniline	62-53-3	1000	10000	mg/kg	0.35	U	0.37	U
	Anthracene	120-12-7	1000	3000	mg/kg	0.18	U	0.18	U
	Benzo(a)anthracene	56-55-3	7	40	mg/kg	0.47		0.44	
	Benzo(a)pyrene	50-32-8	2	7	mg/kg	0.45		0.43	
	Benzo(b)fluoranthene	205-99-2	7	40	mg/kg	0.59		0.55	
	Benzo(ghi)perylene	191-24-2	1000	3000	mg/kg	0.26		0.24	
	Benzo(k)fluoranthene	207-08-9	70	400	mg/kg	0.23		0.2	
	Bis(2-chloroethoxy)methane	111-91-1	500	5000	mg/kg	0.35	U	0.37	U
	Bis(2-chloroethyl)ether	111-44-4	0.7	0.7	mg/kg	0.35	U	0.37	U
	Bis(2-chloroisopropyl)ether	39638-32-9	0.7	0.7	mg/kg	0.35	U	0.37	U
	Bis(2-ethylhexyl)phthalate	117-81-7	90	600	mg/kg	0.35	U	0.37	U
	4-Bromophenyl phenyl ether	101-55-3	100	1000	mg/kg	0.35	U	0.37	U
	Butyl benzyl phthalate	85-68-7	100	1000	mg/kg	0.35	U	0.37	U
	4-Chloroaniline	106-47-8	1	3	mg/kg	0.69	U	0.72	U
	2-Chloronaphthalene	91-58-7	1000	10000	mg/kg	0.35	U	0.37	U
	2-Chlorophenol	95-57-8	0.7	100	mg/kg	0.35	U	0.37	U
	Chrysene	218-01-9	70	400	mg/kg	0.48		0.47	
	Dibenzo(a,h)anthracene	53-70-3	0.7	4	mg/kg	0.18	U	0.18	U
	Dibenzofuran	132-64-9	100	1000	mg/kg	0.35	U	0.37	U
	Di-n-butylphthalate	84-74-2	50	500	mg/kg	0.35	U	0.37	U
	1,2-Dichlorobenzene	95-50-1	9	100	mg/kg	0.35	U	0.37	U
	1,3-Dichlorobenzene	541-73-1	3	200	mg/kg	0.35	U	0.37	U
	1,4-Dichlorobenzene	106-46-7	0.7	1	mg/kg	0.35	U	0.37	U
	3,3'-Dichlorobenzidine	91-94-1	3	20	mg/kg	0.18	U	0.18	U
	2,4-Dichlorophenol	120-83-2	0.7	40	mg/kg	0.35	U	0.37	U
	Diethyl phthalate	84-66-2	10	200	mg/kg	0.35	U	0.37	U
	2,4-Dimethylphenol	105-67-9	0.7	100	mg/kg	0.35	U	0.37	U
	Dimethyl phthalate	131-11-3	0.7	50	mg/kg	0.35	U	0.37	U
	2,4-Dinitrophenol	51-28-5	3	50	mg/kg	0.69	U	0.72	U
	2,4-Dinitrotoluene	121-14-2	0.7	10	mg/kg	0.35	U	0.37	U
	2,6-Dinitrotoluene	606-20-2	100	1000	mg/kg	0.35	U	0.37	U
	Di-n-octylphthalate	117-84-0	1000	10000	mg/kg	0.35	U	0.37	U
	Azobenzene	122-66-7	50	500	mg/kg	0.35	U	0.37	U
	Fluoranthene	206-44-0	1000	3000	mg/kg	0.92		0.84	
	Fluorene	86-73-7	1000	3000	mg/kg	0.18	U	0.18	U
	Hexachlorobenzene	118-74-1	0.7	0.8	mg/kg	0.35	U	0.37	U
	Hexachlorobutadiene	87-68-3	30	100	mg/kg	0.35	U	0.37	U
	Hexachloroethane	67-72-1	0.7	3	mg/kg	0.35	U	0.37	U
	Indeno(1,2,3-cd)pyrene	193-39-5	7	40	mg/kg	0.28		0.3	
	Isophorone	78-59-1	100	1000	mg/kg	0.35	U	0.37	U
	2-Methylnaphthalene	91-57-6	0.7	80	mg/kg	0.18	U	0.18	U
	2-Methylphenol	95-48-7	500	5000	mg/kg	0.35	U	0.37	U
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	500	5000	mg/kg	0.35	U	0.37	U
	Naphthalene	91-20-3	4	20	mg/kg	0.18	U	0.18	U
	Nitrobenzene	98-95-3	500	5000	mg/kg	0.35	U	0.37	U
	2-Nitrophenol	88-75-5	100	1000	mg/kg	0.35	U	0.37	U
	4-Nitrophenol	100-02-7	100	1000	mg/kg	0.69	U	0.72	U
	Pentachlorophenol	87-86-5	3	10	mg/kg	0.35	U	0.37	U
	Phenanthrene	85-01-8	10	1000	mg/kg	0.62		0.6	
	Phenol	108-95-2	1	20	mg/kg	0.35	U	0.37	U
	Pyrene	129-00-0	1000	3000	mg/kg	0.87		0.92	
	Pyridine	110-86-1	500	5000	mg/kg	0.35	U	0.37	U
	1,2,4-Trichlorobenzene	120-82-1	2	6	mg/kg	0.35	U	0.37	U
	2,4,5-Trichlorophenol	95-95-4	4	600	mg/kg	0.35	U	0.37	U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION						WASH-MH212-DC-COMP		Wash-MH186-DC-Comp	
SAMPLING DATE						7/17/2020		08/07/2020	
LAB SAMPLE ID						20G1285-01		20H0388-01	
SAMPLE TYPE						SOIL		SOIL	
		CasNum	RCS-1-14	RCS-2-14	Units	Results	Qual	Results	Qual
	2,4,6-Trichlorophenol	88-06-2	0.7	20	mg/kg	0.35	U	0.37	U
	Total SVOCs				mg/kg	5.17		4.99	
MCP Total Metals									
	Antimony, Total	7440-36-0	20	30	mg/kg	1.7	U	1.8	U
	Arsenic, Total	7440-38-2	20	20	mg/kg	6.2		9.8	
	Barium, Total	7440-39-3	1000	3000	mg/kg	44		64	
	Beryllium, Total	7440-41-7	90	200	mg/kg	0.40		0.47	
	Cadmium, Total	7440-43-9	70	100	mg/kg	0.34	U	0.35	U
	Chromium, Total	7440-47-3	100	200	mg/kg	24		22	
	Lead, Total	7439-92-1	200	600	mg/kg	66		170	
	Mercury, Total	7439-97-6	20	30	mg/kg	0.22		0.14	
	Nickel, Total	7440-02-0	600	1000	mg/kg	22		21	
	Selenium, Total	7782-49-2	400	700	mg/kg	3.4	U	3.5	U
	Silver, Total	7440-22-4	100	200	mg/kg	0.34	U	0.35	U
	Thallium, Total	7440-28-0	8	60	mg/kg	1.7	U	1.8	U
	Vanadium, Total	7440-62-2	400	700	mg/kg	36		41	
	Zinc, Total	7440-66-6	1000	3000	mg/kg	77		90	

U - Not detected at the reported detection limit for the sample.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION					WASH-MH119-DC-COMP		WASH-MH281-DC-COMP	
SAMPLING DATE					8/18/2020		8/18/2020	
LAB SAMPLE ID					L2034460-01		L2034460-02	
SAMPLE TYPE					SOIL		SOIL	
	CasNum	MA-LLAND	MA-ULAND	Units	Results	Qual	Results	Qual
General Chemistry								
	Specific Conductance @ 25 C	NONE	8000	4000	umhos/cm	100	190	
	Solids, Total	NONE			%	91	91.4	
	pH (H)	12408-02-5			SU	7.8	8.1	
	Cyanide, Reactive	57-12-5			mg/kg	10	10	U
	Sulfide, Reactive	NONE			mg/kg	10	10	U
Ignitability of Solids								
	Ignitability	NONE			NI		NI	
MCP Chlorinated Herbicides								
	MCPP	93-65-2			mg/kg	3.6	3.6	U
	MCPA	94-74-6			mg/kg	3.6	3.6	U
	Dalapon	75-99-0			mg/kg	0.036	0.036	U
	Dicamba	1918-00-9			mg/kg	0.036	0.036	U
	Dichloroprop	120-36-5			mg/kg	0.036	0.036	U
	2,4-D	94-75-7			mg/kg	0.036	0.036	U
	2,4-DB	94-82-6			mg/kg	0.036	0.036	U
	2,4,5-T	93-76-5			mg/kg	0.036	0.036	U
	2,4,5-TP (Silvex)	93-72-1			mg/kg	0.036	0.036	U
MCP Organochlorine Pesticides								
	Delta-BHC	319-86-8			mg/kg	0.00174	0.00171	U
	Lindane	58-89-9			mg/kg	0.00058	0.000569	U
	Alpha-BHC	319-84-6			mg/kg	0.000724	0.000711	U
	Beta-BHC	319-85-7			mg/kg	0.00174	0.00171	U
	Heptachlor	76-44-8			mg/kg	0.000869	0.000854	U
	Aldrin	309-00-2			mg/kg	0.00174	0.00171	U
	Heptachlor epoxide	1024-57-3			mg/kg	0.00326	0.0032	U
	Endrin	72-20-8			mg/kg	0.000724	0.000711	U
	Endrin ketone	53494-70-5			mg/kg	0.00174	0.00171	U
	Dieldrin	60-57-1			mg/kg	0.00109	0.00107	U
	4,4'-DDE	72-55-9			mg/kg	0.00174	0.00171	U
	4,4'-DDD	72-54-8			mg/kg	0.00174	0.00171	U
	4,4'-DDT	50-29-3			mg/kg	0.00326	0.0032	U
	Endosulfan I	959-98-8			mg/kg	0.00174	0.00171	U
	Endosulfan II	33213-65-9			mg/kg	0.00174	0.00171	U
	Endosulfan sulfate	1031-07-8			mg/kg	0.000724	0.000711	U
	Methoxychlor	72-43-5			mg/kg	0.00326	0.0032	U
	Chlordane	57-74-9			mg/kg	0.0145	0.0142	U
	Hexachlorobenzene	118-74-1			mg/kg	0.00174	0.00171	U
MCP Polychlorinated Biphenyls								
	Aroclor 1016	12674-11-2			mg/kg	0.0357	0.0346	U
	Aroclor 1221	11104-28-2			mg/kg	0.0357	0.0346	U
	Aroclor 1232	11141-16-5			mg/kg	0.0357	0.0346	U
	Aroclor 1242	53469-21-9			mg/kg	0.0357	0.0346	U
	Aroclor 1248	12672-29-6			mg/kg	0.0357	0.0346	U
	Aroclor 1254	11097-69-1			mg/kg	0.0357	0.0346	U
	Aroclor 1260	11096-82-5			mg/kg	0.0357	0.0346	U
	Aroclor 1262	37324-23-5			mg/kg	0.0357	0.0346	U
	Aroclor 1268	11100-14-4			mg/kg	0.0357	0.0346	U
	PCBs, Total	1336-36-3	2	2	mg/kg	0.0357	0.0346	U
MCP Semivolatile Organics								
	Acenaphthene	83-32-9			mg/kg	0.14	0.14	
	1,2,4-Trichlorobenzene	120-82-1			mg/kg	0.18	0.18	U
	Hexachlorobenzene	118-74-1			mg/kg	0.076	0.076	U
	Bis(2-chloroethyl)ether	111-44-4			mg/kg	0.076	0.076	U
	2-Chloronaphthalene	91-58-7			mg/kg	0.18	0.18	U
	1,2-Dichlorobenzene	95-50-1			mg/kg	0.18	0.18	U
	1,3-Dichlorobenzene	541-73-1			mg/kg	0.18	0.18	U
	1,4-Dichlorobenzene	106-46-7			mg/kg	0.076	0.076	U
	3,3'-Dichlorobenzidine	91-94-1			mg/kg	0.18	0.18	U
	2,4-Dinitrotoluene	121-14-2			mg/kg	0.076	0.076	U
	2,6-Dinitrotoluene	606-20-2			mg/kg	0.18	0.18	U
	Azobenzene	103-33-3			mg/kg	0.18	0.18	U
	Fluoranthene	206-44-0			mg/kg	0.27	1.6	
	4-Bromophenyl phenyl ether	101-55-3			mg/kg	0.18	0.18	U
	Bis(2-chloroisopropyl)ether	108-60-1			mg/kg	0.076	0.076	U
	Bis(2-chloroethoxy)methane	111-91-1			mg/kg	0.2	0.2	U
	Hexachlorobutadiene	87-68-3			mg/kg	0.18	0.18	U
	Hexachloroethane	67-72-1			mg/kg	0.076	0.076	U
	Isophorone	78-59-1			mg/kg	0.16	0.16	U
	Naphthalene	91-20-3			mg/kg	0.18	0.57	
	Nitrobenzene	98-95-3			mg/kg	0.16	0.16	U
	Bis(2-ethylhexyl)phthalate	117-81-7			mg/kg	0.18	0.18	U
	Butyl benzyl phthalate	85-68-7			mg/kg	0.18	0.18	U
	Di-n-butylphthalate	84-74-2			mg/kg	0.18	0.18	U
	Di-n-octylphthalate	117-84-0			mg/kg	0.18	0.18	U
	Diethyl phthalate	84-66-2			mg/kg	0.18	0.18	U
	Dimethyl phthalate	131-11-3			mg/kg	0.076	0.076	U
	Benzo(a)anthracene	56-55-3			mg/kg	0.2	1.3	
	Benzo(a)pyrene	50-32-8			mg/kg	0.17	1.2	
	Benzo(b)fluoranthene	205-99-2			mg/kg	0.26	1.6	
	Benzo(k)fluoranthene	207-08-9			mg/kg	0.11	0.36	U
	Chrysene	218-01-9			mg/kg	0.16	1.1	
	Acenaphthylene	208-96-8			mg/kg	0.14	0.31	
	Anthracene	120-12-7			mg/kg	0.11	0.38	
	Benzo(ghi)perylene	191-24-2			mg/kg	0.14	0.83	
	Fluorene	86-73-7			mg/kg	0.18	0.21	
	Phenanthrene	85-01-8			mg/kg	0.14	1	
	Dibenzo(a,h)anthracene	53-70-3			mg/kg	0.076	0.19	
	Indeno(1,2,3-cd)pyrene	193-39-5			mg/kg	0.14	0.92	
	Pyrene	129-00-0			mg/kg	0.26	1.8	
	Aniline	62-53-3			mg/kg	0.22	0.22	U
	4-Chloroaniline	106-47-8			mg/kg	0.18	0.18	U
	Dibenzofuran	132-64-9			mg/kg	0.18	0.18	U
	2-Methylnaphthalene	91-57-6			mg/kg	0.076	0.29	
	Acetophenone	98-86-2			mg/kg	0.18	0.18	U
	2,4,6-Trichlorophenol	88-06-2			mg/kg	0.076	0.076	U
	2-Chlorophenol	95-57-8			mg/kg	0.076	0.076	U
	2,4-Dichlorophenol	120-83-2			mg/kg	0.076	0.076	U
	2,4-Dimethylphenol	105-67-9			mg/kg	0.076	0.076	U
	2-Nitrophenol	88-75-5			mg/kg	0.39	0.39	U
	4-Nitrophenol	100-02-7			mg/kg	0.25	0.25	U
	2,4-Dinitrophenol	51-28-5			mg/kg	0.87	0.87	U
	Pentachlorophenol	87-86-5			mg/kg	0.36	0.36	U
	Phenol	108-95-2			mg/kg	0.18	0.18	U
	2-Methylphenol	95-48-7			mg/kg	0.18	0.18	U
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5			mg/kg	0.26	0.26	U
	2,4,5-Trichlorophenol	95-95-4			mg/kg	0.18	0.18	U
	Pyridine	110-86-1			mg/kg	0.2	0.2	U
	Total SVOCs		100	100	mg/kg	1.46	13.8	
MCP Total Metals								
	Antimony, Total	7440-36-0			mg/kg	2.16	2.15	U
	Arsenic, Total	7440-38-2	40	40	mg/kg	7.55	5.48	
	Barium, Total	7440-39-3			mg/kg	38.6	41.4	
	Beryllium, Total	7440-41-7			mg/kg	0.216	0.215	U
	Cadmium, Total	7440-43-9	80	30	mg/kg	0.565	0.593	
	Chromium, Total	7440-47-3	1000	1000	mg/kg	14.3	17	

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATIO					WASH-MH119-DC-COMP		WASH-MH281-DC-COMP	
SAMPLING DATE					8/18/2020		8/18/2020	
LAB SAMPLE ID					L2034460-01		L2034460-02	
SAMPLE TYPE					SOIL		SOIL	
	CasNum	MA-LLAND	MA-ULAND	Units	Results	Qual	Results	Qual
Lead, Total	7439-92-1	2000	1000	mg/kg	53.1		96.8	
Mercury, Total	7439-97-6	10	10	mg/kg	0.342		0.165	
Nickel, Total	7440-02-0			mg/kg	11.5		13.7	
Selenium, Total	7782-49-2			mg/kg	2.16	U	2.15	U
Silver, Total	7440-22-4			mg/kg	0.431	U	0.43	U
Thallium, Total	7440-28-0			mg/kg	2.16	U	2.15	U
Vanadium, Total	7440-62-2			mg/kg	22.5		20.4	
Zinc, Total	7440-66-6			mg/kg	52.7		90.6	

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION						WASH-MH212(A)-DC-VOC-1		WASH-MH212(B)-DC-VOC-1		WASH-MH212(C)-DC-VOC-1		WASH-MH212(D)-DC-VOC-1	
SAMPLING DATE						7/17/2020		7/17/2020		7/17/2020		7/17/2020	
LAB SAMPLE ID						20G1126-01		20G1126-02		20G1126-03		20G1126-04	
SAMPLE TYPE						SOIL		SOIL		SOIL		SOIL	
	CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035													
Methylene chloride	75-09-2	0.1	4	400	mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
1,1-Dichloroethane	75-34-3	0.4	9	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Chloroform	67-66-3	0.4	0.2	500	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
Carbon tetrachloride	56-23-5	10	5	30	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
1,2-Dichloropropane	78-87-5	0.1	0.1	30	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Dibromochloromethane	124-48-1	0.005	0.03	20	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
1,1,2-Trichloroethane	79-00-5	0.1	2	40	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Tetrachloroethene	127-18-4	1	10	30	mg/kg	0.0048	U	0.0036	U	0.0046	U	0.0046	U
Chlorobenzene	108-90-7	1	3	100	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Trichlorofluoromethane	75-69-4				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
1,2-Dichloroethane	107-06-2	0.1	0.1	20	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
1,1,1-Trichloroethane	71-55-6	30	500	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Bromodichloromethane	75-27-4	0.1	0.1	30	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
trans-1,3-Dichloropropene	10061-02-6	0.01(2)	0.4(2)	20(2)	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
cis-1,3-Dichloropropene	10061-01-5	0.01(2)	0.4(2)	20(2)	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
1,3-Dichloropropene, Total	542-75-6	0.01	0.4	20	mg/kg	-	-	-	-	-	-	-	-
1,1,1-Dichloropropene	563-58-6	0	0	0	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Bromoform	75-25-2	0.1	1	300	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.02	10	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
Benzene	71-43-2	2	40	40	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Toluene	108-88-3	30	500	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Ethylbenzene	100-41-4	40	500	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Chloromethane	74-87-3				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
Bromomethane	74-83-9	0.5	0.5	30	mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
Vinyl chloride	75-01-4	0.9	0.7	1	mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
Chloroethane	75-00-3				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
1,1-Dichloroethene	75-35-4	3	40	500	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
trans-1,2-Dichloroethene	156-60-5	1	1	500	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Trichloroethene	79-01-6	0.3	0.3	30	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
1,4-Dichlorobenzene	106-46-7	0.7	1	80	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Methyl tert butyl ether	1634-04-4	0.1	100	100	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
p/m-Xylene	179601-23-1	400(3)	100(3)	500(3)	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
o-Xylene	95-47-6	400(3)	100(3)	500(3)	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Xylenes, Total	1330-20-7	400	100	500	mg/kg	0.0033	U	0.0035	U	0.0031	U	0.0035	U
cis-1,2-Dichloroethene	156-59-2	0.3	0.1	100	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
1,2-Dichloroethene, Total	540-59-0				mg/kg	-	-	-	-	-	-	-	-
Dibromomethane	74-95-3				mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
1,2,3-Trichloropropane	96-18-4				mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Styrene	100-42-5	3	4	70	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Dichlorodifluoromethane	75-71-8				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
Acetone	67-64-1	6	50	400	mg/kg	0.21	U	0.088	U	0.31	U	0.20	U
Carbon disulfide	75-15-0				mg/kg	0.0049	U	0.0053	U	0.0046	U	0.0053	U
Methyl ethyl ketone	78-93-3	4	50	400	mg/kg	0.033	U	0.035	U	0.031	U	0.035	U
Methyl isobutyl ketone	108-10-1	0.4	50	400	mg/kg	0.016	U	0.018	U	0.015	U	0.018	U
2-Hexanone	591-78-6				mg/kg	0.016	U	0.018	U	0.015	U	0.018	U
Bromochloromethane	74-97-5				mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Tetrahydrofuran	109-99-9				mg/kg	0.0082	U	0.0088	U	0.0077	U	0.0088	U
2,2-Dichloropropane	594-20-7	0	0	0	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
1,2-Dibromoethane	106-93-4	0.1	0.1	1	mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
1,3-Dichloropropane	142-28-9				mg/kg	0.00082	U	0.00088	U	0.00077	U	0.00088	U
1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.1	80	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
Bromobenzene	108-86-1				mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
n-Butylbenzene	104-51-8	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
sec-Butylbenzene	135-98-8	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U
tert-Butylbenzene	98-06-6	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U	0.0015	U	0.0018	U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION						WASH-MH212(A)-DC-VOC-1	WASH-MH212(B)-DC-VOC-1	WASH-MH212(C)-DC-VOC-1	WASH-MH212(D)-DC-VOC-1
SAMPLING DATE						7/17/2020	7/17/2020	7/17/2020	7/17/2020
LAB SAMPLE ID						20G1126-01	20G1126-02	20G1126-03	20G1126-04
SAMPLE TYPE						SOIL	SOIL	SOIL	SOIL
	CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual
o-Chlorotoluene	95-49-8				mg/kg	0.0016	U	0.0018	U
p-Chlorotoluene	106-43-4				mg/kg	0.0016	U	0.0018	U
1,2-Dibromo-3-chloropropane	96-12-8				mg/kg	0.0016	U	0.0018	U
Hexachlorobutadiene	87-68-3	30	30	30	mg/kg	0.0016	U	0.0018	U
Isopropylbenzene	98-82-8	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U
p-Isopropyltoluene	99-87-6	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U
Naphthalene	91-20-3	4	20	500	mg/kg	0.0033	U	0.0035	U
n-Propylbenzene	103-65-1	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U
1,2,3-Trichlorobenzene	87-61-6				mg/kg	0.0016	U	0.0018	U
1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg	0.0016	U	0.0018	U
1,3,5-Trimethylbenzene	108-67-8	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U
1,2,4-Trimethylbenzene	95-63-6	100(1)	100(1)	100(1)	mg/kg	0.0016	U	0.0018	U
Diethyl ether	60-29-7				mg/kg	0.0082	U	0.0088	U
Diisopropyl Ether	108-20-3				mg/kg	0.00082	U	0.00088	U
Ethyl-Tert-Butyl-Ether	637-92-3				mg/kg	0.00082	U	0.00088	U
Tertiary-Amyl Methyl Ether	994-05-8				mg/kg	0.00082	U	0.00077	U
1,4-Dioxane	123-91-1	0.2	6	20	mg/kg	0.082	U	0.088	U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

U - Not detected at the reported detection limit for the sample.

- Not analyzed.

(1) - Value for C9-C10 aromatics used.

(2) -Value for 1,3-Dichloropropene used.

(3) - Criteria applicable to xylene (total), the sum of the xylene isomers.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION						WASH-MH212(E)-DC-VOC-1	WASH-MH212(F)-DC-VOC-1	WASH-MH212(G)-DC-VOC-1	Wash-MH186(A)-DC-VOC	Wash-MH186(B)-DC-VOC			
SAMPLING DATE						7/17/2020	7/17/2020	7/17/2020	8/7/2020	8/7/2020			
LAB SAMPLE ID						20G1126-05	20G1126-06	20G1126-07	20H0387-01	20H0387-02			
SAMPLE TYPE						SOIL	SOIL	SOIL	SOIL	SOIL			
	CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035													
Methylene chloride	75-09-2	0.1	4	400	mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U
1,1-Dichloroethane	75-34-3	0.4	9	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Chloroform	67-66-3	0.4	0.2	500	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U
Carbon tetrachloride	56-23-5	10	5	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
1,2-Dichloropropane	78-87-5	0.1	0.1	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Dibromochloromethane	124-48-1	0.005	0.03	20	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U
1,1,2-Trichloroethane	79-00-5	0.1	2	40	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Tetrachloroethene	127-18-4	1	10	30	mg/kg	0.0043	U	0.0051	U	0.0022	U	0.0094	U
Chlorobenzene	108-90-7	1	3	100	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Trichlorofluoromethane	75-69-4				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U
1,2-Dichloroethane	107-06-2	0.1	0.1	20	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
1,1,1-Trichloroethane	71-55-6	30	500	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Bromodichloromethane	75-27-4	0.1	0.1	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
trans-1,3-Dichloropropene	10061-02-6	0.01(2)	0.4(2)	20(2)	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U
cis-1,3-Dichloropropene	10061-01-5	0.01(2)	0.4(2)	20(2)	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U
1,3-Dichloropropene, Total	542-75-6	0.01	0.4	20	mg/kg	-	-	-	-	-	-	-	-
1,1-Dichloropropene	563-58-6	0	0	0	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Bromoform	75-25-2	0.1	1	300	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.02	10	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U
Benzene	71-43-2	2	40	40	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Toluene	108-88-3	30	500	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Ethylbenzene	100-41-4	40	500	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Chloromethane	74-87-3				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U
Bromomethane	74-83-9	0.5	0.5	30	mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U
Vinyl chloride	75-01-4	0.9	0.7	1	mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U
Chloroethane	75-00-3				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U
1,1-Dichloroethene	75-35-4	3	40	500	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U
trans-1,2-Dichloroethene	156-60-5	1	1	500	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Trichloroethene	79-01-6	0.3	0.3	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0021	U
1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
1,4-Dichlorobenzene	106-46-7	0.7	1	80	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Methyl tert butyl ether	1634-04-4	0.1	100	100	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U
p/m-Xylene	179601-23-1	400(3)	100(3)	500(3)	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U
o-Xylene	95-47-6	400(3)	100(3)	500(3)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Xylenes, Total	1330-20-7	400	100	500	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U
cis-1,2-Dichloroethene	156-59-2	0.3	0.1	100	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0044	U
1,2-Dichloroethene, Total	540-59-0				mg/kg	-	-	-	-	-	-	-	-
Dibromomethane	74-95-3				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
1,2,3-Trichloropropane	96-18-4				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Styrene	100-42-5	3	4	70	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Dichlorodifluoromethane	75-71-8				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U
Acetone	67-64-1	6	50	400	mg/kg	0.19	U	0.085	U	0.16	U	0.083	U
Carbon disulfide	75-15-0				mg/kg	0.0042	U	0.0051	U	0.0066	U	0.005	U
Methyl ethyl ketone	78-93-3	4	50	400	mg/kg	0.028	U	0.034	U	0.044	U	0.033	U
Methyl isobutyl ketone	108-10-1	0.4	50	400	mg/kg	0.014	U	0.017	U	0.022	U	0.017	U
2-Hexanone	591-78-6				mg/kg	0.014	U	0.017	U	0.022	U	0.017	U
Bromochloromethane	74-97-5				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Tetrahydrofuran	109-99-9				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U
2,2-Dichloropropane	594-20-7	0	0	0	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
1,2-Dibromoethane	106-93-4	0.1	0.1	1	mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U
1,3-Dichloropropane	142-28-9				mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U
1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.1	80	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
Bromobenzene	108-86-1				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
n-Butylbenzene	104-51-8	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
sec-Butylbenzene	135-98-8	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U
tert-Butylbenzene	98-06-6	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION						WASH-MH212(E)-DC-VOC-1	WASH-MH212(F)-DC-VOC-1	WASH-MH212(G)-DC-VOC-1	Wash-MH186(A)-DC-VOC	Wash-MH186(B)-DC-VOC				
SAMPLING DATE						7/17/2020	7/17/2020	7/17/2020	8/7/2020	8/7/2020				
LAB SAMPLE ID						20G1126-05	20G1126-06	20G1126-07	20H0387-01	20H0387-02				
SAMPLE TYPE						SOIL	SOIL	SOIL	SOIL	SOIL				
	CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results
o-Chlorotoluene	95-49-8				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
p-Chlorotoluene	106-43-4				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
1,2-Dibromo-3-chloropropane	96-12-8				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
Hexachlorobutadiene	87-68-3	30	30	30	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
isopropylbenzene	98-82-8	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
p-Isopropyltoluene	99-87-6	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
Naphthalene	91-20-3	4	20	500	mg/kg	0.0028	U	0.0034	U	0.0044	U	0.0033	U	0.0041
n-Propylbenzene	103-65-1	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
1,2,3-Trichlorobenzene	87-61-6				mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
1,3,5-Trimethylbenzene	108-67-8	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
1,2,4-Trimethylbenzene	95-63-6	100(1)	100(1)	100(1)	mg/kg	0.0014	U	0.0017	U	0.0022	U	0.0017	U	0.0021
Diethyl ether	60-29-7				mg/kg	0.007	U	0.0085	U	0.011	U	0.0083	U	0.01
Diisopropyl Ether	108-20-3				mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
Ethyl-Tert-Butyl-Ether	637-92-3				mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
Tertiary-Amyl Methyl Ether	994-05-8				mg/kg	0.0007	U	0.00085	U	0.0011	U	0.00083	U	0.001
1,4-Dioxane	123-91-1	0.2	6	20	mg/kg	0.07	U	0.085	U	0.11	U	0.083	U	0.1

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

U - Not detected at the reported detection limit for the sample.

- Not analyzed.

(1) - Value for C9-C10 aromatics used.

(2) -Value for 1,3-Dichloropropene used.

(3) - Criteria applicable to xylene (total), the sum of the xylene isomers.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION							Wash-MH186(C)-DC-VOC		WASH-MH119A-DC-VOC		WASH-MH119B-DC-VOC		WASH-MH119C-DC-VOC		WASH-MH281A-DC-VOC	
SAMPLING DATE							8/7/2020		8/18/2020		8/18/2020		8/18/2020		8/18/2020	
LAB SAMPLE ID							20H0387-03		L2033621-02		L2033621-03		L2033621-04		L2033621-06	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL	
	CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035																
Methylene chloride	75-09-2	0.1	4	400	mg/kg	U	0.011	U	0.0038	U	0.005	U	0.0042	U	0.0041	U
1,1-Dichloroethane	75-34-3	0.4	9	500	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Chloroform	67-66-3	0.4	0.2	500	mg/kg	U	0.0046	U	0.0011	U	0.0015	U	0.0012	U	0.0012	U
Carbon tetrachloride	56-23-5	10	5	30	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
1,2-Dichloropropane	78-87-5	0.1	0.1	30	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Dibromochloromethane	124-48-1	0.005	0.03	20	mg/kg	U	0.0011	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
1,1,2-Trichloroethane	79-00-5	0.1	2	40	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Tetrachloroethene	127-18-4	1	10	30	mg/kg	U	0.010	U	0.0038	U	0.0066	U	0.003	U	0.0018	U
Chlorobenzene	108-90-7	1	3	100	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Trichlorofluoromethane	75-69-4				mg/kg	U	0.011	U	0.003	U	0.004	U	0.0033	U	0.0033	U
1,2-Dichloroethane	107-06-2	0.1	0.1	20	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
1,1,1-Trichloroethane	71-55-6	30	500	500	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Bromodichloromethane	75-27-4	0.1	0.1	30	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
trans-1,3-Dichloropropene	10061-02-6	0.01(2)	0.4(2)	20(2)	mg/kg	U	0.0011	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
cis-1,3-Dichloropropene	10061-01-5	0.01(2)	0.4(2)	20(2)	mg/kg	U	0.0011	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
1,3-Dichloropropene, Total	542-75-6	0.01	0.4	20	mg/kg	-	-	-	0.00038	U	0.0005	U	0.00042	U	0.00041	U
1,1-Dichloropropene	563-58-6	0	0	0	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Bromoform	75-25-2	0.1	1	300	mg/kg	U	0.0023	U	0.003	U	0.004	U	0.0033	U	0.0033	U
1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.02	10	mg/kg	U	0.0011	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Benzene	71-43-2	2	40	40	mg/kg	U	0.0023	U	0.0007	U	0.0005	U	0.00045	U	0.00048	U
Toluene	108-88-3	30	500	500	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Ethylbenzene	100-41-4	40	500	500	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Chloromethane	74-87-3				mg/kg	U	0.011	U	0.003	U	0.004	U	0.0033	U	0.0033	U
Bromomethane	74-83-9	0.5	0.5	30	mg/kg	U	0.011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Vinyl chloride	75-01-4	0.9	0.7	1	mg/kg	U	0.011	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Chloroethane	75-00-3				mg/kg	U	0.011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,1-Dichloroethene	75-35-4	3	40	500	mg/kg	U	0.0046	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
trans-1,2-Dichloroethene	156-60-5	1	1	500	mg/kg	U	0.0023	U	0.0011	U	0.0015	U	0.0012	U	0.0012	U
Trichloroethene	79-01-6	0.3	0.3	30	mg/kg	U	0.0023	U	0.00062	U	0.00078	U	0.00042	U	0.00041	U
1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,4-Dichlorobenzene	106-46-7	0.7	1	80	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Methyl tert butyl ether	1634-04-4	0.1	100	100	mg/kg	U	0.0046	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
p/m-Xylene	179601-23-1	400(3)	100(3)	500(3)	mg/kg	U	0.0046	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
o-Xylene	95-47-6	400(3)	100(3)	500(3)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Xylenes, Total	1330-20-7	400	100	500	mg/kg	U	0.0046	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
cis-1,2-Dichloroethene	156-59-2	0.3	0.1	100	mg/kg	U	0.0023	U	0.00077	U	0.001	U	0.00083	U	0.00083	U
1,2-Dichloroethene, Total	540-59-0				mg/kg	-	-	-	0.00077	U	0.001	U	0.00083	U	0.00083	U
Dibromomethane	74-95-3				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,2,3-Trichloropropane	96-18-4				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Styrene	100-42-5	3	4	70	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Dichlorodifluoromethane	75-71-8				mg/kg	U	0.011	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
Acetone	67-64-1	6	50	400	mg/kg	U	0.11	U	0.028	U	0.025	U	0.026	U	0.028	U
Carbon disulfide	75-15-0				mg/kg	U	0.0069	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
Methyl ethyl ketone	78-93-3	4	50	400	mg/kg	U	0.046	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
Methyl isobutyl ketone	108-10-1	0.4	50	400	mg/kg	U	0.023	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
2-Hexanone	591-78-6				mg/kg	U	0.023	U	0.0076	U	0.01	U	0.0083	U	0.0083	U
Bromochloromethane	74-97-5				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Tetrahydrofuran	109-99-9				mg/kg	U	0.011	U	0.003	U	0.004	U	0.0033	U	0.0033	U
2,2-Dichloropropane	594-20-7	0	0	0	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,2-Dibromoethane	106-93-4	0.1	0.1	1	mg/kg	U	0.0011	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
1,3-Dichloropropane	142-28-9				mg/kg	U	0.0011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.1	80	mg/kg	U	0.0023	U	0.00038	U	0.0005	U	0.00042	U	0.00041	U
Bromobenzene	108-86-1				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
n-Butylbenzene	104-51-8	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
sec-Butylbenzene	135-98-8	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
tert-Butylbenzene	98-06-6	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION							Wash-MH186(C)-DC-VOC		WASH-MH119A-DC-VOC		WASH-MH119B-DC-VOC		WASH-MH119C-DC-VOC		WASH-MH281A-DC-VOC	
SAMPLING DATE							8/7/2020		8/18/2020		8/18/2020		8/18/2020		8/18/2020	
LAB SAMPLE ID							20H0387-03		L2033621-02		L2033621-03		L2033621-04		L2033621-06	
SAMPLE TYPE							SOIL		SOIL		SOIL		SOIL		SOIL	
	CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
o-Chlorotoluene	95-49-8				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
p-Chlorotoluene	106-43-4				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,2-Dibromo-3-chloropropane	96-12-8				mg/kg	U	0.0023	U	0.0023	U	0.003	U	0.0025	U	0.0025	U
Hexachlorobutadiene	87-68-3	30	30	30	mg/kg	U	0.0023	U	0.003	U	0.004	U	0.0033	U	0.0033	U
Isopropylbenzene	98-82-8	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
p-Isopropyltoluene	99-87-6	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
Naphthalene	91-20-3	4	20	500	mg/kg	U	0.0046	U	0.003	U	0.004	U	0.0033	U	0.0033	U
n-Propylbenzene	103-65-1	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.00076	U	0.001	U	0.00083	U	0.00083	U
1,2,3-Trichlorobenzene	87-61-6				mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,3,5-Trimethylbenzene	108-67-8	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,2,4-Trimethylbenzene	95-63-6	100(1)	100(1)	100(1)	mg/kg	U	0.0023	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Diethyl ether	60-29-7				mg/kg	U	0.011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Diisopropyl Ether	108-20-3				mg/kg	U	0.0011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Ethyl-Tert-Butyl-Ether	637-92-3				mg/kg	U	0.0011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
Tertiary-Amyl Methyl Ether	994-05-8				mg/kg	U	0.0011	U	0.0015	U	0.002	U	0.0017	U	0.0016	U
1,4-Dioxane	123-91-1	0.2	6	20	mg/kg	U	0.11	U	0.061	U	0.08	U	0.067	U	0.066	U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

U - Not detected at the reported detection limit for the sample.

- Not analyzed.

(1) - Value for C9-C10 aromatics used.

(2) - Value for 1,3-Dichloropropene used.

(3) - Criteria applicable to xylene (total), the sum of the xylene isomers.

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION							WASH-MH281B-DC-VOC		WASH-MH281C-DC-VOC		WASH-MH281D-DC-VOC	
SAMPLING DATE							8/18/2020		8/18/2020		8/18/2020	
LAB SAMPLE ID							L2033621-07		L2033621-08		L2033621-09	
SAMPLE TYPE							SOIL		SOIL		SOIL	
	CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units		Results	Qual	Results	Qual	Results	Qual
MCP Volatile Organics by EPA 5035												
Methylene chloride	75-09-2	0.1	4	400	mg/kg		0.0044	U	0.0038	U	0.0041	U
1,1-Dichloroethane	75-34-3	0.4	9	500	mg/kg		0.00089	U	0.00077	U	0.00083	U
Chloroform	67-66-3	0.4	0.2	500	mg/kg		0.0013	U	0.0012	U	0.0012	U
Carbon tetrachloride	56-23-5	10	5	30	mg/kg		0.00089	U	0.00077	U	0.00083	U
1,2-Dichloropropane	78-87-5	0.1	0.1	30	mg/kg		0.00089	U	0.00077	U	0.00083	U
Dibromochloromethane	124-48-1	0.005	0.03	20	mg/kg		0.00089	U	0.00077	U	0.00083	U
1,1,2-Trichloroethane	79-00-5	0.1	2	40	mg/kg		0.00089	U	0.00077	U	0.00083	U
Tetrachloroethene	127-18-4	1	10	30	mg/kg		0.0013	U	0.0013	U	0.0014	U
Chlorobenzene	108-90-7	1	3	100	mg/kg		0.0044	U	0.00038	U	0.00041	U
Trichlorofluoromethane	75-69-4				mg/kg		0.0036	U	0.0031	U	0.0033	U
1,2-Dichloroethane	107-06-2	0.1	0.1	20	mg/kg		0.00089	U	0.00077	U	0.00083	U
1,1,1-Trichloroethane	71-55-6	30	500	500	mg/kg		0.00044	U	0.00038	U	0.00041	U
Bromodichloromethane	75-27-4	0.1	0.1	30	mg/kg		0.00044	U	0.00038	U	0.00041	U
trans-1,3-Dichloropropene	10061-02-6	0.01(2)	0.4(2)	20(2)	mg/kg		0.00089	U	0.00077	U	0.00083	U
cis-1,3-Dichloropropene	10061-01-5	0.01(2)	0.4(2)	20(2)	mg/kg		0.00044	U	0.00038	U	0.00041	U
1,3-Dichloropropene, Total	542-75-6	0.01	0.4	20	mg/kg		0.00044	U	0.00038	U	0.00041	U
1,1-Dichloropropene	563-58-6	0	0	0	mg/kg		0.00044	U	0.00038	U	0.00041	U
Bromoform	75-25-2	0.1	1	300	mg/kg		0.0036	U	0.0031	U	0.0033	U
1,1,2,2-Tetrachloroethane	79-34-5	0.005	0.02	10	mg/kg		0.00044	U	0.00038	U	0.00041	U
Benzene	71-43-2	2	40	40	mg/kg		0.00066	U	0.00068	U	0.00054	U
Toluene	108-88-3	30	500	500	mg/kg		0.00089	U	0.00077	U	0.00083	U
Ethylbenzene	100-41-4	40	500	500	mg/kg		0.00089	U	0.00077	U	0.00083	U
Chloromethane	74-87-3				mg/kg		0.0036	U	0.0031	U	0.0033	U
Bromomethane	74-83-9	0.5	0.5	30	mg/kg		0.0018	U	0.0015	U	0.0016	U
Vinyl chloride	75-01-4	0.9	0.7	1	mg/kg		0.00089	U	0.00077	U	0.00083	U
Chloroethane	75-00-3				mg/kg		0.0018	U	0.0015	U	0.0016	U
1,1-Dichloroethene	75-35-4	3	40	500	mg/kg		0.00089	U	0.00077	U	0.00083	U
trans-1,2-Dichloroethene	156-60-5	1	1	500	mg/kg		0.0013	U	0.0012	U	0.0012	U
Trichloroethene	79-01-6	0.3	0.3	30	mg/kg		0.00044	U	0.00038	U	0.00046	U
1,2-Dichlorobenzene	95-50-1	9	100	300	mg/kg		0.0018	U	0.0015	U	0.0016	U
1,3-Dichlorobenzene	541-73-1	3	100	100	mg/kg		0.0018	U	0.0015	U	0.0016	U
1,4-Dichlorobenzene	106-46-7	0.7	1	80	mg/kg		0.0018	U	0.0015	U	0.0016	U
Methyl tert butyl ether	1634-04-4	0.1	100	100	mg/kg		0.0018	U	0.0015	U	0.0016	U
p/m-Xylene	179601-23-1	400(3)	100(3)	500(3)	mg/kg		0.0018	U	0.0015	U	0.0016	U
o-Xylene	95-47-6	400(3)	100(3)	500(3)	mg/kg		0.00089	U	0.00077	U	0.00083	U
Xylenes, Total	1330-20-7	400	100	500	mg/kg		0.00089	U	0.00077	U	0.00083	U
cis-1,2-Dichloroethene	156-59-2	0.3	0.1	100	mg/kg		0.00089	U	0.00077	U	0.00083	U
1,2-Dichloroethene, Total	540-59-0				mg/kg		0.00089	U	0.00077	U	0.00083	U
Dibromomethane	74-95-3				mg/kg		0.0018	U	0.0015	U	0.0016	U
1,2,3-Trichloropropane	96-18-4				mg/kg		0.0018	U	0.0015	U	0.0016	U
Styrene	100-42-5	3	4	70	mg/kg		0.00089	U	0.00077	U	0.00083	U
Dichlorodifluoromethane	75-71-8				mg/kg		0.0089	U	0.0077	U	0.0083	U
Acetone	67-64-1	6	50	400	mg/kg		0.037	U	0.032	U	0.036	U
Carbon disulfide	75-15-0				mg/kg		0.0089	U	0.0077	U	0.0083	U
Methyl ethyl ketone	78-93-3	4	50	400	mg/kg		0.0089	U	0.0077	U	0.0083	U
Methyl isobutyl ketone	108-10-1	0.4	50	400	mg/kg		0.0089	U	0.0077	U	0.0083	U
2-Hexanone	591-78-6				mg/kg		0.0089	U	0.0077	U	0.0083	U
Bromochloromethane	74-97-5				mg/kg		0.0018	U	0.0015	U	0.0016	U
Tetrahydrofuran	109-99-9				mg/kg		0.0036	U	0.0031	U	0.0033	U
2,2-Dichloropropane	594-20-7	0	0	0	mg/kg		0.0018	U	0.0015	U	0.0016	U
1,2-Dibromoethane	106-93-4	0.1	0.1	1	mg/kg		0.00089	U	0.00077	U	0.00083	U
1,3-Dichloropropane	142-28-9				mg/kg		0.0018	U	0.0015	U	0.0016	U
1,1,1,2-Tetrachloroethane	630-20-6	0.1	0.1	80	mg/kg		0.00044	U	0.00038	U	0.00041	U
Bromobenzene	108-86-1				mg/kg		0.0018	U	0.0015	U	0.0016	U
n-Butylbenzene	104-51-8	100(1)	100(1)	100(1)	mg/kg		0.00089	U	0.00077	U	0.00083	U
sec-Butylbenzene	135-98-8	100(1)	100(1)	100(1)	mg/kg		0.00089	U	0.00077	U	0.00083	U
tert-Butylbenzene	98-06-6	100(1)	100(1)	100(1)	mg/kg		0.0018	U	0.0015	U	0.0016	U

Table 2 - Summary of Analytical Results for Soil Samples -- 2019 and 2020
Green Line Extension Project - Washington Street
Somerville, Massachusetts

LOCATION							WASH-MH281B-DC-VOC	WASH-MH281C-DC-VOC	WASH-MH281D-DC-VOC
SAMPLING DATE							8/18/2020	8/18/2020	8/18/2020
LAB SAMPLE ID							L2033621-07	L2033621-08	L2033621-09
SAMPLE TYPE							SOIL	SOIL	SOIL
	CasNum	S-1/GW-1	S-1/GW-2	S-1/GW-3	Units	Results	Qual	Results	Qual
o-Chlorotoluene	95-49-8				mg/kg	0.0018	U	0.0015	U
p-Chlorotoluene	106-43-4				mg/kg	0.0018	U	0.0015	U
1,2-Dibromo-3-chloropropane	96-12-8				mg/kg	0.0027	U	0.0023	U
Hexachlorobutadiene	87-68-3	30	30	30	mg/kg	0.0036	U	0.0031	U
Isopropylbenzene	98-82-8	100(1)	100(1)	100(1)	mg/kg	0.00089	U	0.00077	U
p-Isopropyltoluene	99-87-6	100(1)	100(1)	100(1)	mg/kg	0.00089	U	0.00077	U
Naphthalene	91-20-3	4	20	500	mg/kg	0.0036	U	0.0031	U
n-Propylbenzene	103-65-1	100(1)	100(1)	100(1)	mg/kg	0.00089	U	0.00077	U
1,2,3-Trichlorobenzene	87-61-6				mg/kg	0.0018	U	0.0015	U
1,2,4-Trichlorobenzene	120-82-1	2	6	700	mg/kg	0.0018	U	0.0015	U
1,3,5-Trimethylbenzene	108-67-8	100(1)	100(1)	100(1)	mg/kg	0.0018	U	0.0015	U
1,2,4-Trimethylbenzene	95-63-6	100(1)	100(1)	100(1)	mg/kg	0.0018	U	0.0015	U
Diethyl ether	60-29-7				mg/kg	0.0018	U	0.0015	U
Diisopropyl Ether	108-20-3				mg/kg	0.0018	U	0.0015	U
Ethyl-Tert-Butyl-Ether	637-92-3				mg/kg	0.0018	U	0.0015	U
Tertiary-Amyl Methyl Ether	994-05-8				mg/kg	0.0018	U	0.0015	U
1,4-Dioxane	123-91-1	0.2	6	20	mg/kg	0.071	U	0.062	U

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

U - Not detected at the reported detection limit for the sample.

- Not analyzed.

(1) - Value for C9-C10 aromatics used.

(2) -Value for 1,3-Dichloropropene used.

(3) - Criteria applicable to xylene (total), the sum of the xylene isomers.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-311B-21-DC				GLC-301B-07-DC			
						GLC-311B-21-DC-COMP		GLC-311B-21-DC-VOC-2		GLC-301B-07-DC-COMP		GLC-301B-07-DC-VOC-3	
						L2049316-03		L2049316-04		L2049316-05		L2049316-06	
						11/9/2020		11/9/2020		11/9/2020		11/9/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
VOCs													
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.0041	U	NA		0.0049	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.00083	U	NA		0.00099	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.0012	U	NA		0.0015	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.00083	U	NA		0.00099	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.00083	U	NA		0.00099	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.00083	U	NA		0.00099	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.00083	U	NA		0.00099	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.00061		NA		0.00056	
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.00041	U	NA		0.00049	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.0033	U	NA		0.004	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.00083	U	NA		0.00099	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.00041	U	NA		0.00049	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.00041	U	NA		0.00049	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00083	U	NA		0.00099	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00041	U	NA		0.00049	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.00041	U	NA		0.00049	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	NA		0.00041	U	NA		0.00049	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.0033	U	NA		0.004	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.00041	U	NA		0.00049	U
	Benzene	mg/kg	2	NS	NS	NA		0.00041	U	NA		0.00049	U
	Toluene	mg/kg	30	NS	NS	NA		0.00083	U	NA		0.00099	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.00083	U	NA		0.00099	U
	Chloromethane	mg/kg	100	NS	NS	NA		0.0033	U	NA		0.004	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0016	U	NA		0.002	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.00083	U	NA		0.00099	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0016	U	NA		0.002	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.00083	U	NA		0.00099	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		0.0012	U	NA		0.0015	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		0.00041	U	NA		0.00049	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.0016	U	NA		0.002	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.0016	U	NA		0.002	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.0016	U	NA		0.002	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		0.0016	U	NA		0.002	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	NA		0.0016	U	NA		0.002	U
	o-Xylene	mg/kg	100(2)	NS	NS	NA		0.00083	U	NA		0.00099	U
	Xylenes, Total	mg/kg	100	NS	NS	NA		0.00083	U	NA		0.00099	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA		0.00083	U	NA		0.00099	U
	1,2-Dichloroethene, Total	mg/kg	0.3	NS	NS	NA		0.00083	U	NA		0.00099	U
	Dibromomethane	mg/kg	500	NS	NS	NA		0.0016	U	NA		0.002	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA		0.0016	U	NA		0.002	U
	Styrene	mg/kg	3	NS	NS	NA		0.00083	U	NA		0.00099	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA		0.0083	U	NA		0.0099	U
	Acetone	mg/kg	6	NS	NS	NA		0.021	U	NA		0.025	U
	Carbon disulfide	mg/kg	100	NS	NS	NA		0.0083	U	NA		0.0099	U
	Methyl ethyl ketone	mg/kg	4	NS	NS	NA		0.0083	U	NA		0.0099	U
	Methyl isobutyl ketone	mg/kg	0.4	NS	NS	NA		0.0083	U	NA		0.0099	U
	2-Hexanone	mg/kg	100	NS	NS	NA		0.0083	U	NA		0.0099	U
	Bromochloromethane	mg/kg	NS	NS	NS	NA		0.0016	U	NA		0.002	U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA		0.0033	U	NA		0.004	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	NA		0.0016	U	NA		0.002	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA		0.00083	U	NA		0.00099	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA		0.0016	U	NA		0.002	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA		0.00041	U	NA		0.00049	U
	Bromobenzene	mg/kg	100	NS	NS	NA		0.0016	U	NA		0.002	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00083	U	NA		0.00099	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00083	U	NA		0.00099	U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA		0.0016	U	NA		0.002	U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA		0.0016	U	NA		0.002	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	NA		0.0016	U	NA		0.002	U

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-311B-21-DC				GLC-301B-07-DC			
						GLC-311B-21-DC-COMP		GLC-311B-21-DC-VOC-2		GLC-301B-07-DC-COMP		GLC-301B-07-DC-VOC-3	
						L2049316-03		L2049316-04		L2049316-05		L2049316-06	
						11/9/2020		11/9/2020		11/9/2020		11/9/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA		0.0025	U	NA		0.003	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.0033	U	NA		0.004	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA		0.00083	U	NA		0.00099	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA		0.00083	U	NA		0.00099	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.0033	U	NA		0.004	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.00083	U	NA		0.00099	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0016	U	NA		0.002	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0016	U	NA		0.002	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0016	U	NA		0.002	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0016	U	NA		0.002	U
	Diethyl ether	mg/kg	100	NS	NS	NA		0.0016	U	NA		0.002	U
	Diisopropyl Ether	mg/kg	100	NS	NS	NA		0.0016	U	NA		0.002	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0016	U	NA		0.002	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0016	U	NA		0.002	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.066	U	NA		0.079	U
	Total VOCs	mg/kg	NS	4	10	NA		0.00061		NA		0.00056	
SVOCs													
	Acenaphthene	mg/kg	4	NS	NS	0.15	U	NA		0.14	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.19	U	NA		0.18	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.19	U	NA		0.18	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.19	U	NA		0.18	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.19	U	NA		0.18	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.19	U	NA		0.18	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.19	U	NA		0.18	U	NA	
	Azobenzene	mg/kg	50	NS	NS	0.19	U	NA		0.18	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	2.3		NA		0.58		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.19	U	NA		0.18	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.21	U	NA		0.19	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.19	U	NA		0.18	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.17	U	NA		0.16	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.31		NA		0.18	U	NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.17	U	NA		0.16	U	NA	
	Bis(2-ethylhexyl)phthalate	mg/kg	90	NS	NS	0.19	U	NA		0.18	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.19	U	NA		0.18	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.19	U	NA		0.18	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.19	U	NA		0.18	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.19	U	NA		0.18	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	1		NA		0.28		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.86		NA		0.25		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	1.1		NA		0.32		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.3		NA		0.1	U	NA	
	Chrysene	mg/kg	70	NS	NS	0.99		NA		0.26		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.15	U	NA		0.14	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.45		NA		0.1		NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.46		NA		0.14		NA	
	Fluorene	mg/kg	1,000	NS	NS	0.19	U	NA		0.18	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	1.7		NA		0.4		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.13		NA		0.074	U	NA	
	Indeno(1,2,3-cd)pyrene	mg/kg	7	NS	NS	0.54		NA		0.17		NA	
	Pyrene	mg/kg	1,000	NS	NS	2		NA		0.52		NA	
	Aniline	mg/kg	1,000	NS	NS	0.23	U	NA		0.21	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.19	U	NA		0.18	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.2		NA		0.18	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.26		NA		0.074	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-311B-21-DC				GLC-301B-07-DC			
						GLC-311B-21-DC-COMP		GLC-311B-21-DC-VOC-2		GLC-301B-07-DC-COMP		GLC-301B-07-DC-VOC-3	
						L2049316-03		L2049316-04		L2049316-05		L2049316-06	
						11/9/2020		11/9/2020		11/9/2020		11/9/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	Acetophenone	mg/kg	1,000	NS	NS	0.19	U	NA		0.18	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.08	U	NA		0.074	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.41	U	NA		0.38	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.27	U	NA		0.25	U	NA	
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.92	U	NA		0.85	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.38	U	NA		0.35	U	NA	
	Phenol	mg/kg	1	NS	NS	0.19	U	NA		0.18	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.19	U	NA		0.18	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	0.28	U	NA		0.25	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.19	U	NA		0.18	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.21	U	NA		0.19	U	NA	
	Total SVOCs	mg/kg	NS	100	100	12.6		NA		3.02		NA	
PCBs													
	Aroclor 1016	mg/kg	1	NS	NS	0.0368	U	NA		0.0349	U	NA	
	Aroclor 1221	mg/kg	1	NS	NS	0.0368	U	NA		0.0349	U	NA	
	Aroclor 1232	mg/kg	1	NS	NS	0.0368	U	NA		0.0349	U	NA	
	Aroclor 1242	mg/kg	1	NS	NS	0.0368	U	NA		0.0349	U	NA	
	Aroclor 1248	mg/kg	1	NS	NS	0.0368	U	NA		0.0349	U	NA	
	Aroclor 1254	mg/kg	1	NS	NS	0.097		NA		0.134		NA	
	Aroclor 1260	mg/kg	1	NS	NS	0.0368	U	NA		0.0349	U	NA	
	Aroclor 1262	mg/kg	1	NS	NS	0.0368	U	NA		0.0349	U	NA	
	Aroclor 1268	mg/kg	1	NS	NS	0.0368	U	NA		0.0349	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.097		NA		0.134		NA	
Pesticides													
	Delta-BHC	mg/kg	10	NS	NS	0.00181	U	NA		0.00167	U	NA	
	Lindane	mg/kg	0.003	NS	NS	0.000603	U	NA		0.000558	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	0.000754	U	NA		0.000698	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	0.00181	U	NA		0.00167	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	0.000905	U	NA		0.000837	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	0.00181	U	NA		0.00167	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.00356	P	NA		0.00314	U	NA	
	Endrin	mg/kg	10	NS	NS	0.000754	U	NA		0.000698	U	NA	
	Endrin ketone	mg/kg	NS	NS	NS	0.00181	U	NA		0.00167	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	0.00113	U	NA		0.00105	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	0.0023	P	NA		0.00167	U	NA	
	4,4'-DDD	mg/kg	8	NS	NS	0.00383	P	NA		0.00167	U	NA	
	4,4'-DDT	mg/kg	6	NS	NS	0.00729		NA		0.00314	U	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	0.00181	U	NA		0.00167	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	0.00181	U	NA		0.00167	U	NA	
	Endosulfan sulfate	mg/kg	NS	NS	NS	0.000754	U	NA		0.000698	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	0.00339	U	NA		0.00314	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	0.0151	U	NA		0.014	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00181	U	NA		0.00167	U	NA	
Herbicides													
	MCP	mg/kg	NS	NS	NS	3.8	U	NA		3.5	U	NA	
	MCPA	mg/kg	100	NS	NS	3.8	U	NA		3.5	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	0.038	U	NA		0.035	U	NA	
	Dicamba	mg/kg	500	NS	NS	0.038	U	NA		0.035	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	0.038	U	NA		0.035	U	NA	
	2,4-D	mg/kg	100	NS	NS	0.038	U	NA		0.035	U	NA	
	2,4-DB	mg/kg	100	NS	NS	0.038	U	NA		0.035	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	0.038	U	NA		0.035	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.038	U	NA		0.035	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-311B-21-DC				GLC-301B-07-DC			
						GLC-311B-21-DC-COMP		GLC-311B-21-DC-VOC-2		GLC-301B-07-DC-COMP		GLC-301B-07-DC-VOC-3	
						L2049316-03		L2049316-04		L2049316-05		L2049316-06	
						11/9/2020		11/9/2020		11/9/2020		11/9/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
TPH													
	TPH (C10-C36)	mg/kg	1,000	2,500	5,000	72.4		NA		40.7		NA	
Metals, total													
	Antimony	mg/kg	20	NS	NS	2.29	U	NA		2.12	U	NA	
	Arsenic	mg/kg	20	40	40	9.19		NA		5.86		NA	
	Barium	mg/kg	1,000	NS	NS	46.7		NA		32.4		NA	
	Beryllium	mg/kg	90	NS	NS	0.229	U	NA		0.212	U	NA	
	Cadmium	mg/kg	70	30	80	0.457	U	NA		0.423	U	NA	
	Chromium	mg/kg	100	1,000	1,000	19.5		NA		16		NA	
	Lead	mg/kg	200	1,000	2,000	41.9		NA		23.5		NA	
	Mercury	mg/kg	20	10	10	0.103		NA		0.263		NA	
	Nickel	mg/kg	600	NS	NS	15.2		NA		13.4		NA	
	Selenium	mg/kg	400	NS	NS	3.25		NA		2.34		NA	
	Silver	mg/kg	100	NS	NS	0.457	U	NA		0.423	U	NA	
	Thallium	mg/kg	8	NS	NS	2.29	U	NA		2.12	U	NA	
	Vanadium	mg/kg	400	NS	NS	34.4		NA		29		NA	
	Zinc	mg/kg	1,000	NS	NS	70.8		NA		55.7		NA	
General Chemistry													
	Specific Conductance	umhos/cm	NS	4,000	8,000	82		NA		54		NA	
	pH	SU	NS	NS	NS	7.9		NA		8.1		NA	
	Cyanide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Sulfide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Ignitability		NS	NS	NS	NI		NA		NI		NA	

Notes:
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
su - Standard unit.
umhos/cm - Micro-mhos per centimeter.
I - The lower value for the two columns has been reported due to obvious interference.
ND - Not detected.
NI - Not ignitable.
NA - Sample not analyzed for the listed analyte.
NS - No MassDEP standards exist for this analyte.
P - The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.
U - Analyte was not detected at specified quantitation limit.
Values in **bold** indicate the analyte was detected.
VOCs - Volatile Organic Compounds.
SVOCs - Semivolatile Organic Compounds.
PCBs - Polychlorinated Biphenyls.
TPH - Total Petroleum Hydrocarbons.
RC - Reportable concentration.
(1) - MassDEP RC for C9-C10 aromatics used.
(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.
(3) - MassDEP RC for Dichloropropane used.
(4) - MassDEP RC for Dichloropropene used.
(5) - MassDEP RC for Chlorotoluene used.
* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)RCS-2-FILL-2-DC				GLC-VMF(20)-RCS-2-FILL-1-DC			
						GLC-VMF(20)RCS-2-FILL-2-DC-COMP		GLC-VMF(20)RCS-2-FILL-2-DC-VOC-4		GLC-VMF(20)-RCS-2-FILL-1-DC-COMP		GLC-VMF(20)-RCS-2-FILL-1-DC-VOC-6	
						L2050552-03		L2050552-04		L2051038-07		L2051038-08	
						11/13/2020		11/13/2020		11/17/2020		11/17/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
VOCs													
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.0046	U	NA		0.0037	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.00093	U	NA		0.00074	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.0014	U	NA		0.0011	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.00093	U	NA		0.00074	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.00093	U	NA		0.00074	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.00093	U	NA		0.00074	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.00093	U	NA		0.00074	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.00088		NA		0.00054	
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.00046	U	NA		0.00037	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.0037	U	NA		0.003	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.00093	U	NA		0.00074	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.00046	U	NA		0.00037	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.00046	U	NA		0.00037	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00093	U	NA		0.00074	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00046	U	NA		0.00037	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.00046	U	NA		0.00037	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	NA		0.00046	U	NA		0.00037	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.0037	U	NA		0.003	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.00046	U	NA		0.00037	U
	Benzene	mg/kg	2	NS	NS	NA		0.00046	U	NA		0.00037	U
	Toluene	mg/kg	30	NS	NS	NA		0.00093	U	NA		0.0042	
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.00093	U	NA		0.002	
	Chloromethane	mg/kg	100	NS	NS	NA		0.0037	U	NA		0.003	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0018	U	NA		0.0015	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.00093	U	NA		0.00074	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0018	U	NA		0.0015	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.00093	U	NA		0.00074	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		0.0014	U	NA		0.0011	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		0.00046	U	NA		0.00037	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.0018	U	NA		0.0015	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.0018	U	NA		0.0015	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.0018	U	NA		0.0015	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		0.0018	U	NA		0.0015	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	NA		0.0018	U	NA		0.0024	
	o-Xylene	mg/kg	100(2)	NS	NS	NA		0.00093	U	NA		0.0065	
	Xylenes, Total	mg/kg	100	NS	NS	NA		0.00093	U	NA		0.0089	
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA		0.00093	U	NA		0.00074	U
	1,2-Dichloroethene, Total	mg/kg	0.3	NS	NS	NA		0.00093	U	NA		0.00074	U
	Dibromomethane	mg/kg	500	NS	NS	NA		0.0018	U	NA		0.0015	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA		0.0018	U	NA		0.0015	U
	Styrene	mg/kg	3	NS	NS	NA		0.00093	U	NA		0.00074	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA		0.0093	U	NA		0.0074	U
	Acetone	mg/kg	6	NS	NS	NA		0.023	U	NA		0.018	U
	Carbon disulfide	mg/kg	100	NS	NS	NA		0.0093	U	NA		0.0074	U
	Methyl ethyl ketone	mg/kg	4	NS	NS	NA		0.0093	U	NA		0.0074	U
	Methyl isobutyl ketone	mg/kg	0.4	NS	NS	NA		0.0093	U	NA		0.0074	U
	2-Hexanone	mg/kg	100	NS	NS	NA		0.0093	U	NA		0.0074	U
	Bromochloromethane	mg/kg	NS	NS	NS	NA		0.0018	U	NA		0.0015	U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA		0.0037	U	NA		0.003	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	NA		0.0018	U	NA		0.0015	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA		0.00093	U	NA		0.00074	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA		0.0018	U	NA		0.0015	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA		0.00046	U	NA		0.00037	U
	Bromobenzene	mg/kg	100	NS	NS	NA		0.0018	U	NA		0.0015	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00093	U	NA		0.00074	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00093	U	NA		0.00074	U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA		0.0018	U	NA		0.0015	U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA		0.0018	U	NA		0.0015	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	NA		0.0018	U	NA		0.0015	U

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)RCS-2-FILL-2-DC				GLC-VMF(20)-RCS-2-FILL-1-DC			
						GLC-VMF(20)RCS-2-FILL-2-DC-COMP		GLC-VMF(20)RCS-2-FILL-2-DC-VOC-4		GLC-VMF(20)-RCS-2-FILL-1-DC-COMP		GLC-VMF(20)-RCS-2-FILL-1-DC-VOC-6	
						L2050552-03		L2050552-04		L2051038-07		L2051038-08	
						11/13/2020		11/13/2020		11/17/2020		11/17/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA		0.0028	U	NA		0.0022	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.0037	U	NA		0.003	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA		0.00093	U	NA		0.00074	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA		0.00093	U	NA		0.00074	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.0037	U	NA		0.003	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.00093	U	NA		0.00074	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0018	U	NA		0.0015	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0018	U	NA		0.0015	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0018	U	NA		0.0027	
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0018	U	NA		0.0015	U
	Diethyl ether	mg/kg	100	NS	NS	NA		0.0018	U	NA		0.0015	U
	Diisopropyl Ether	mg/kg	100	NS	NS	NA		0.0018	U	NA		0.0015	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0018	U	NA		0.0015	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0018	U	NA		0.0015	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.074	U	NA		0.059	U
	Total VOCs	mg/kg	NS	4	10	NA		0.00088		NA		0.01834	
SVOCs													
	Acenaphthene	mg/kg	4	NS	NS	0.15	U	NA		0.14	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.18	U	NA		0.17	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.18	U	NA		0.17	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.18	U	NA		0.17	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.18	U	NA		0.17	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Azobenzene	mg/kg	50	NS	NS	0.18	U	NA		0.17	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	0.74		NA		0.97		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.2	U	NA		0.19	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.18	U	NA		0.17	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.16	U	NA		0.16	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.18	U	NA		0.17	U	NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.16	U	NA		0.16	U	NA	
	Bis(2-ethylhexyl)phthalate	mg/kg	90	NS	NS	0.18	U	NA		0.17	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.18	U	NA		0.17	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.18	U	NA		0.17	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.36		NA		0.48		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.4		NA		0.54		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	0.47		NA		0.68		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.17		NA		0.25		NA	
	Chrysene	mg/kg	70	NS	NS	0.36		NA		0.5		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.15	U	NA		0.14	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.12		NA		0.19		NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.21		NA		0.31		NA	
	Fluorene	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	0.51		NA		0.6		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.077	U	NA		0.082		NA	
	Indeno(1,2,3-cd)pyrene	mg/kg	7	NS	NS	0.23		NA		0.35		NA	
	Pyrene	mg/kg	1,000	NS	NS	0.61		NA		0.84		NA	
	Aniline	mg/kg	1,000	NS	NS	0.22	U	NA		0.21	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.18	U	NA		0.17	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.077	U	NA		0.12		NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)RCS-2-FILL-2-DC				GLC-VMF(20)-RCS-2-FILL-1-DC			
						GLC-VMF(20)RCS-2-FILL-2-DC-COMP		GLC-VMF(20)RCS-2-FILL-2-DC-VOC-4		GLC-VMF(20)-RCS-2-FILL-1-DC-COMP		GLC-VMF(20)-RCS-2-FILL-1-DC-VOC-6	
						L2050552-03		L2050552-04		L2051038-07		L2051038-08	
						11/13/2020		11/13/2020		11/17/2020		11/17/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	Acetophenone	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.4	U	NA		0.38	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.26	U	NA		0.24	U	NA	
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.88	U	NA		0.84	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.37	U	NA		0.35	U	NA	
	Phenol	mg/kg	1	NS	NS	0.18	U	NA		0.17	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.18	U	NA		0.17	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	0.26	U	NA		0.25	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.18	U	NA		0.17	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.2	U	NA		0.19	U	NA	
	Total SVOCs	mg/kg	NS	100	100	4.18		NA		5.912		NA	
PCBs													
	Aroclor 1016	mg/kg	1	NS	NS	0.0361	U	NA		0.0338	U	NA	
	Aroclor 1221	mg/kg	1	NS	NS	0.0361	U	NA		0.0338	U	NA	
	Aroclor 1232	mg/kg	1	NS	NS	0.0361	U	NA		0.0338	U	NA	
	Aroclor 1242	mg/kg	1	NS	NS	0.0361	U	NA		0.0338	U	NA	
	Aroclor 1248	mg/kg	1	NS	NS	0.0361	U	NA		0.0338	U	NA	
	Aroclor 1254	mg/kg	1	NS	NS	0.137		NA		0.228		NA	
	Aroclor 1260	mg/kg	1	NS	NS	0.0361	U	NA		0.0338	U	NA	
	Aroclor 1262	mg/kg	1	NS	NS	0.0361	U	NA		0.0338	U	NA	
	Aroclor 1268	mg/kg	1	NS	NS	0.0361	U	NA		0.0338	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.137		NA		0.228		NA	
Pesticides													
	Delta-BHC	mg/kg	10	NS	NS	0.00177	U	NA		0.00163	U	NA	
	Lindane	mg/kg	0.003	NS	NS	0.00059	U	NA		0.000544	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	0.000737	U	NA		0.00068	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	0.00177	U	NA		0.00163	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	0.000885	U	NA		0.000815	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	0.00177	U	NA		0.00163	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.014	P	NA		0.00306	U	NA	
	Endrin	mg/kg	10	NS	NS	0.000737	U	NA		0.00068	U	NA	
	Endrin ketone	mg/kg	NS	NS	NS	0.00177	U	NA		0.00163	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	0.00111	U	NA		0.00102	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	0.00177	U	NA		0.00163	U	NA	
	4,4'-DDD	mg/kg	8	NS	NS	0.00454		NA		0.00353		NA	
	4,4'-DDT	mg/kg	6	NS	NS	0.00598	IP	NA		0.00306	U	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	0.00177	U	NA		0.00163	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	0.00177	U	NA		0.00163	U	NA	
	Endosulfan sulfate	mg/kg	NS	NS	NS	0.000737	U	NA		0.00068	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	0.00332	U	NA		0.00306	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	0.0147	U	NA		0.0136	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00177	U	NA		0.00163	U	NA	
Herbicides													
	MCP	mg/kg	NS	NS	NS	3.7	U	NA		3.5	U	NA	
	MCPA	mg/kg	100	NS	NS	3.7	U	NA		3.5	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	0.037	U	NA		0.035	U	NA	
	Dicamba	mg/kg	500	NS	NS	0.037	U	NA		0.035	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4-D	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4-DB	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)RCS-2-FILL-2-DC				GLC-VMF(20)-RCS-2-FILL-1-DC			
						GLC-VMF(20)RCS-2-FILL-2-DC-COMP		GLC-VMF(20)RCS-2-FILL-2-DC-VOC-4		GLC-VMF(20)-RCS-2-FILL-1-DC-COMP		GLC-VMF(20)-RCS-2-FILL-1-DC-VOC-6	
						L2050552-03		L2050552-04		L2051038-07		L2051038-08	
						11/13/2020		11/13/2020		11/17/2020		11/17/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
TPH													
	TPH (C10-C36)	mg/kg	1,000	2,500	5,000	78.4		NA		84.2		NA	
Metals, total													
	Antimony	mg/kg	20	NS	NS	2.23	U	NA		2.11	U	NA	
	Arsenic	mg/kg	20	40	40	6.64		NA		8.29		NA	
	Barium	mg/kg	1,000	NS	NS	39.4		NA		35		NA	
	Beryllium	mg/kg	90	NS	NS	0.223	U	NA		0.211	U	NA	
	Cadmium	mg/kg	70	30	80	0.696		NA		0.532		NA	
	Chromium	mg/kg	100	1,000	1,000	16.3		NA		17.8		NA	
	Lead	mg/kg	200	1,000	2,000	32.4		NA		31.9		NA	
	Mercury	mg/kg	20	10	10	0.162		NA		0.091		NA	
	Nickel	mg/kg	600	NS	NS	14.4		NA		13.7		NA	
	Selenium	mg/kg	400	NS	NS	2.23	U	NA		2.11	U	NA	
	Silver	mg/kg	100	NS	NS	0.446	U	NA		0.422	U	NA	
	Thallium	mg/kg	8	NS	NS	2.23	U	NA		2.11	U	NA	
	Vanadium	mg/kg	400	NS	NS	35.4		NA		29.1		NA	
	Zinc	mg/kg	1,000	NS	NS	66.4		NA		65.7		NA	
General Chemistry													
	Specific Conductance	umhos/cm	NS	4,000	8,000	94		NA		89		NA	
	pH	SU	NS	NS	NS	8		NA		8.2		NA	
	Cyanide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Sulfide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Ignitability		NS	NS	NS	NI		NA		NI		NA	

Notes:
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
su - Standard unit.
umhos/cm - Micro-mhos per centimeter.
I - The lower value for the two columns has been reported due to obvious interference.
ND - Not detected.
NI - Not ignitable.
NA - Sample not analyzed for the listed analyte.
NS - No MassDEP standards exist for this analyte.
P - The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.
U - Analyte was not detected at specified quantitation limit.
Values in **bold** indicate the analyte was detected.
VOCs - Volatile Organic Compounds.
SVOCs - Semivolatile Organic Compounds.
PCBs - Polychlorinated Biphenyls.
TPH - Total Petroleum Hydrocarbons.
RC - Reportable concentration.
(1) - MassDEP RC for C9-C10 aromatics used.
(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.
(3) - MassDEP RC for Dichloropropane used.
(4) - MassDEP RC for Dichloropropene used.
(5) - MassDEP RC for Chlorotoluene used.
* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL-10-DC				GLC-VMF(20)-RCS-2-FILL(7)-DC			
						GLC-VMF(20)-RCS-2-FILL-10-DC-COMP		GLC-VMF(20)-RCS-2-FILL-10-DC-VOC-2		GLC-VMF(20)-RCS-2-FILL(7)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(7)-DC-VOC(1)	
						L2051038-09		L2051038-10		L2052968-01		L2052968-02	
						11/17/2020		11/17/2020		11/30/2020		11/30/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
VOCs													
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.0035	U	NA		0.0025	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.00069	U	NA		0.00051	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.001	U	NA		0.00076	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.00069	U	NA		0.00051	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.00069	U	NA		0.00051	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.00069	U	NA		0.00051	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.00069	U	NA		0.00051	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.00035		NA		0.00026	
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.00035	U	NA		0.00025	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.0028	U	NA		0.002	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.00069	U	NA		0.00051	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.00035	U	NA		0.00025	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.00035	U	NA		0.00025	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00069	U	NA		0.00051	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00035	U	NA		0.00025	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.00035	U	NA		0.00025	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	NA		0.00035	U	NA		0.00025	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.0028	U	NA		0.002	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.00035	U	NA		0.00025	U
	Benzene	mg/kg	2	NS	NS	NA		0.00035	U	NA		0.00025	U
	Toluene	mg/kg	30	NS	NS	NA		0.00069	U	NA		0.00051	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.00069	U	NA		0.00051	U
	Chloromethane	mg/kg	100	NS	NS	NA		0.0028	U	NA		0.002	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0014	U	NA		0.001	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.00069	U	NA		0.00051	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.001	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.00069	U	NA		0.00051	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		0.001	U	NA		0.00076	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		0.00035	U	NA		0.00025	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.0014	U	NA		0.001	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.0014	U	NA		0.001	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.0014	U	NA		0.001	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		0.0014	U	NA		0.001	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	NA		0.0014	U	NA		0.001	U
	o-Xylene	mg/kg	100(2)	NS	NS	NA		0.00069	U	NA		0.00051	U
	Xylenes, Total	mg/kg	100	NS	NS	NA		0.00069	U	NA		0.00051	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA		0.00069	U	NA		0.00051	U
	1,2-Dichloroethene, Total	mg/kg	0.3	NS	NS	NA		0.00069	U	NA		0.00051	U
	Dibromomethane	mg/kg	500	NS	NS	NA		0.0014	U	NA		0.001	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.001	U
	Styrene	mg/kg	3	NS	NS	NA		0.00069	U	NA		0.00051	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA		0.0069	U	NA		0.0051	U
	Acetone	mg/kg	6	NS	NS	NA		0.017	U	NA		0.013	
	Carbon disulfide	mg/kg	100	NS	NS	NA		0.0069	U	NA		0.0051	U
	Methyl ethyl ketone	mg/kg	4	NS	NS	NA		0.0069	U	NA		0.0051	U
	Methyl isobutyl ketone	mg/kg	0.4	NS	NS	NA		0.0069	U	NA		0.0051	U
	2-Hexanone	mg/kg	100	NS	NS	NA		0.0069	U	NA		0.0051	U
	Bromochloromethane	mg/kg	NS	NS	NS	NA		0.0014	U	NA		0.001	U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA		0.0028	U	NA		0.002	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	NA		0.0014	U	NA		0.001	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA		0.00069	U	NA		0.00051	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA		0.0014	U	NA		0.001	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA		0.00035	U	NA		0.00025	U
	Bromobenzene	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.001	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00069	U	NA		0.00051	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00069	U	NA		0.00051	U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.001	U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.001	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	NA		0.0014	U	NA		0.001	U

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL-10-DC				GLC-VMF(20)-RCS-2-FILL(7)-DC			
						GLC-VMF(20)-RCS-2-FILL-10-DC-COMP		GLC-VMF(20)-RCS-2-FILL-10-DC-VOC-2		GLC-VMF(20)-RCS-2-FILL(7)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(7)-DC-VOC(1)	
						L2051038-09		L2051038-10		L2052968-01		L2052968-02	
						11/17/2020		11/17/2020		11/30/2020		11/30/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA		0.0021	U	NA		0.0015	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.0028	U	NA		0.002	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA		0.00069	U	NA		0.00051	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA		0.00069	U	NA		0.00051	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.0028	U	NA		0.002	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.00069	U	NA		0.00051	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0014	U	NA		0.001	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0014	U	NA		0.001	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0014	U	NA		0.001	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0014	U	NA		0.001	U
	Diethyl ether	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.001	U
	Diisopropyl Ether	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.001	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0014	U	NA		0.001	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0014	U	NA		0.001	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.056	U	NA		0.041	U
	Total VOCs	mg/kg	NS	4	10	NA		0.00035		NA		0.01326	
SVOCs													
	Acenaphthene	mg/kg	4	NS	NS	0.14	U	NA		0.14	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.18	U	NA		0.17	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.18	U	NA		0.17	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.18	U	NA		0.17	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.18	U	NA		0.17	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Azobenzene	mg/kg	50	NS	NS	0.18	U	NA		0.17	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	0.23		NA		0.31		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.19	U	NA		0.19	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.18	U	NA		0.17	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.16	U	NA		0.16	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.18	U	NA		0.17	U	NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.16	U	NA		0.16	U	NA	
	Bis(2-ethylhexyl)phthalate	mg/kg	90	NS	NS	0.18	U	NA		0.17	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.18	U	NA		0.17	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.18	U	NA		0.17	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.12		NA		0.16		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.14		NA		0.17		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	0.19		NA		0.2		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.11	U	NA		0.1	U	NA	
	Chrysene	mg/kg	70	NS	NS	0.14		NA		0.16		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.14	U	NA		0.14	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.11	U	NA		0.1	U	NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.14	U	NA		0.14	U	NA	
	Fluorene	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	0.16		NA		0.2		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	Indeno(1,2,3-cd)pyrene	mg/kg	7	NS	NS	0.14	U	NA		0.14	U	NA	
	Pyrene	mg/kg	1,000	NS	NS	0.2		NA		0.28		NA	
	Aniline	mg/kg	1,000	NS	NS	0.21	U	NA		0.21	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.18	U	NA		0.17	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.083		NA		0.073	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL-10-DC				GLC-VMF(20)-RCS-2-FILL(7)-DC			
						GLC-VMF(20)-RCS-2-FILL-10-DC-COMP		GLC-VMF(20)-RCS-2-FILL-10-DC-VOC-2		GLC-VMF(20)-RCS-2-FILL(7)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(7)-DC-VOC(1)	
						Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*		
	Acetophenone	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.074	U	NA		0.073	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.38	U	NA		0.38	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.25	U	NA		0.24	U	NA	
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.85	U	NA		0.84	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.35	U	NA		0.35	U	NA	
	Phenol	mg/kg	1	NS	NS	0.18	U	NA		0.17	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.18	U	NA		0.17	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	0.25	U	NA		0.25	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.18	U	NA		0.17	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.19	U	NA		0.19	U	NA	
	Total SVOCs	mg/kg	NS	100	100	1.263		NA		1.48		NA	
PCBs													
	Aroclor 1016	mg/kg	1	NS	NS	0.0361	U	NA		0.0335	U	NA	
	Aroclor 1221	mg/kg	1	NS	NS	0.0361	U	NA		0.0335	U	NA	
	Aroclor 1232	mg/kg	1	NS	NS	0.0361	U	NA		0.0335	U	NA	
	Aroclor 1242	mg/kg	1	NS	NS	0.0361	U	NA		0.0335	U	NA	
	Aroclor 1248	mg/kg	1	NS	NS	0.0361	U	NA		0.0335	U	NA	
	Aroclor 1254	mg/kg	1	NS	NS	0.0826		NA		0.458		NA	
	Aroclor 1260	mg/kg	1	NS	NS	0.0361	U	NA		0.0335	U	NA	
	Aroclor 1262	mg/kg	1	NS	NS	0.0361	U	NA		0.0335	U	NA	
	Aroclor 1268	mg/kg	1	NS	NS	0.0361	U	NA		0.0335	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.0826		NA		0.458		NA	
Pesticides													
	Delta-BHC	mg/kg	10	NS	NS	0.00169	U	NA		0.00167	U	NA	
	Lindane	mg/kg	0.003	NS	NS	0.000563	U	NA		0.000557	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	0.000704	U	NA		0.000696	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	0.00169	U	NA		0.00167	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	0.000845	U	NA		0.000836	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	0.00169	U	NA		0.00167	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.00317	U	NA		0.00313	U	NA	
	Endrin	mg/kg	10	NS	NS	0.000704	U	NA		0.000696	U	NA	
	Endrin ketone	mg/kg	NS	NS	NS	0.00169	U	NA		0.00167	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	0.00106	U	NA		0.00104	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	0.00169	U	NA		0.00167	U	NA	
	4,4'-DDD	mg/kg	8	NS	NS	0.00169	U	NA		0.00472		NA	
	4,4'-DDT	mg/kg	6	NS	NS	0.00317	U	NA		0.00876	IP	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	0.00169	U	NA		0.00167	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	0.00169	U	NA		0.00167	U	NA	
	Endosulfan sulfate	mg/kg	NS	NS	NS	0.000704	U	NA		0.000696	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	0.00317	U	NA		0.00313	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	0.0141	U	NA		0.0214	IP	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00169	U	NA		0.00167	U	NA	
Herbicides													
	MCP	mg/kg	NS	NS	NS	3.6	U	NA		3.5	U	NA	
	MCPA	mg/kg	100	NS	NS	3.6	U	NA		3.5	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	0.036	U	NA		0.035	U	NA	
	Dicamba	mg/kg	500	NS	NS	0.036	U	NA		0.035	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	0.036	U	NA		0.035	U	NA	
	2,4-D	mg/kg	100	NS	NS	0.036	U	NA		0.035	U	NA	
	2,4-DB	mg/kg	100	NS	NS	0.036	U	NA		0.035	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	0.036	U	NA		0.035	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.036	U	NA		0.035	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL-10-DC				GLC-VMF(20)-RCS-2-FILL(7)-DC			
						GLC-VMF(20)-RCS-2-FILL-10-DC-COMP		GLC-VMF(20)-RCS-2-FILL-10-DC-VOC-2		GLC-VMF(20)-RCS-2-FILL(7)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(7)-DC-VOC(1)	
						L2051038-09		L2051038-10		L2052968-01		L2052968-02	
						11/17/2020		11/17/2020		11/30/2020		11/30/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
TPH													
	TPH (C10-C36)	mg/kg	1,000	2,500	5,000	58		NA		76.1		NA	
Metals, total													
	Antimony	mg/kg	20	NS	NS	2.06	U	NA		2.03	U	NA	
	Arsenic	mg/kg	20	40	40	4.85		NA		6.3		NA	
	Barium	mg/kg	1,000	NS	NS	31.1		NA		45		NA	
	Beryllium	mg/kg	90	NS	NS	0.206	U	NA		0.211		NA	
	Cadmium	mg/kg	70	30	80	0.581		NA		0.564		NA	
	Chromium	mg/kg	100	1,000	1,000	26.8		NA		27.2		NA	
	Lead	mg/kg	200	1,000	2,000	13.4		NA		30.1		NA	
	Mercury	mg/kg	20	10	10	0.079	U	NA		0.085	U	NA	
	Nickel	mg/kg	600	NS	NS	17.8		NA		16.6		NA	
	Selenium	mg/kg	400	NS	NS	2.06	U	NA		2.03	U	NA	
	Silver	mg/kg	100	NS	NS	0.412	U	NA		0.406	U	NA	
	Thallium	mg/kg	8	NS	NS	2.06	U	NA		2.03	U	NA	
	Vanadium	mg/kg	400	NS	NS	41.8		NA		31.9		NA	
	Zinc	mg/kg	1,000	NS	NS	42.8		NA		51.7		NA	
General Chemistry													
	Specific Conductance	umhos/cm	NS	4,000	8,000	210		NA		110		NA	
	pH	SU	NS	NS	NS	8		NA		8.1		NA	
	Cyanide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Sulfide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Ignitability		NS	NS	NS	NI		NA		NI		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

I - The lower value for the two columns has been reported due to obvious interference.

ND - Not detected.

NI - Not ignitable.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

P - The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

RC - Reportable concentration.

(1) - MassDEP RC for C9-C10 aromatics used.

(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.

(3) - MassDEP RC for Dichloropropane used.

(4) - MassDEP RC for Dichloropropene used.

(5) - MassDEP RC for Chlorotoluene used.

* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(8)- DC				GLC-VMF(20)-RCS-2-FILL(14)- DC			
						GLC-VMF(20)- RCS-2-FILL(8)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(8)- DC-VOC(1)		GLC-VMF(20)- RCS-2-FILL(14)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(14)- DC-VOC-3	
						L2052968-03		L2052968-04		L2053491-01		L2053491-02	
						11/30/2020		11/30/2020		12/2/2020		12/2/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
VOCs													
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.003	U	NA		0.0039	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.0006	U	NA		0.00078	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.0009	U	NA		0.0012	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.0006	U	NA		0.00078	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.0006	U	NA		0.00078	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.0006	U	NA		0.00078	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.0006	U	NA		0.00078	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.0003	U	NA		0.00057	
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.0003	U	NA		0.00039	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.0083		NA		0.0031	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.0006	U	NA		0.00078	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.0003	U	NA		0.00039	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.0003	U	NA		0.00039	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.0006	U	NA		0.00078	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.0003	U	NA		0.00039	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.0003	U	NA		0.00039	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	NA		0.0003	U	NA		0.00039	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.0024	U	NA		0.0031	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.0003	U	NA		0.00039	U
	Benzene	mg/kg	2	NS	NS	NA		0.0003	U	NA		0.00039	U
	Toluene	mg/kg	30	NS	NS	NA		0.0006	U	NA		0.00078	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.0006	U	NA		0.00078	U
	Chloromethane	mg/kg	100	NS	NS	NA		0.0024	U	NA		0.0031	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0012	U	NA		0.0016	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.0006	U	NA		0.00078	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.0006	U	NA		0.00078	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		0.0009	U	NA		0.0012	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		0.0003	U	NA		0.00039	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.0012	U	NA		0.0016	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		0.0012	U	NA		0.0016	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	NA		0.0012	U	NA		0.0016	U
	o-Xylene	mg/kg	100(2)	NS	NS	NA		0.0006	U	NA		0.00078	U
	Xylenes, Total	mg/kg	100	NS	NS	NA		0.0006	U	NA		0.00078	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA		0.0006	U	NA		0.00078	U
	1,2-Dichloroethene, Total	mg/kg	0.3	NS	NS	NA		0.0006	U	NA		0.00078	U
	Dibromomethane	mg/kg	500	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0016	U
	Styrene	mg/kg	3	NS	NS	NA		0.0006	U	NA		0.00078	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA		0.006	U	NA		0.0078	U
	Acetone	mg/kg	6	NS	NS	NA		0.015	U	NA		0.019	U
	Carbon disulfide	mg/kg	100	NS	NS	NA		0.006	U	NA		0.0078	U
	Methyl ethyl ketone	mg/kg	4	NS	NS	NA		0.006	U	NA		0.0078	U
	Methyl isobutyl ketone	mg/kg	0.4	NS	NS	NA		0.006	U	NA		0.0078	U
	2-Hexanone	mg/kg	100	NS	NS	NA		0.006	U	NA		0.0078	U
	Bromochloromethane	mg/kg	NS	NS	NS	NA		0.0012	U	NA		0.0016	U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA		0.0024	U	NA		0.0031	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA		0.0006	U	NA		0.00078	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA		0.0003	U	NA		0.00039	U
	Bromobenzene	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0016	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.0006	U	NA		0.00078	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.0006	U	NA		0.00078	U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0016	U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0016	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	NA		0.0012	U	NA		0.0016	U

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(8)-DC				GLC-VMF(20)-RCS-2-FILL(14)-DC			
						GLC-VMF(20)-RCS-2-FILL(8)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(8)-DC-VOC(1)		GLC-VMF(20)-RCS-2-FILL(14)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(14)-DC-VOC-3	
						L2052968-03		L2052968-04		L2053491-01		L2053491-02	
						11/30/2020		11/30/2020		12/2/2020		12/2/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA		0.0018	U	NA		0.0023	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.0024	U	NA		0.0031	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA		0.0006	U	NA		0.00078	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA		0.0006	U	NA		0.00078	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.0024	U	NA		0.0031	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.0006	U	NA		0.00078	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0012	U	NA		0.0016	U
	Diethyl ether	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0016	U
	Diisopropyl Ether	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0016	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0012	U	NA		0.0016	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0012	U	NA		0.0016	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.048	U	NA		0.062	U
	Total VOCs	mg/kg	NS	4	10	NA		0.0083		NA		0.00057	
SVOCs													
	Acenaphthene	mg/kg	4	NS	NS	0.13	U	NA		0.14	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.17	U	NA		0.18	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.17	U	NA		0.18	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.17	U	NA		0.18	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.17	U	NA		0.18	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.17	U	NA		0.18	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.17	U	NA		0.18	U	NA	
	Azobenzene	mg/kg	50	NS	NS	0.17	U	NA		0.18	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	0.67		NA		0.7		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.17	U	NA		0.18	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.18	U	NA		0.2	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.17	U	NA		0.18	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.15	U	NA		0.16	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.17	U	NA		0.18	U	NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.15	U	NA		0.16	U	NA	
	Bis(2-ethylhexyl)phthalate	mg/kg	90	NS	NS	0.17	U	NA		0.18	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.17	U	NA		0.18	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.17	U	NA		0.18	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.17	U	NA		0.18	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.17	U	NA		0.18	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.31		NA		0.38		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.34		NA		0.4		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	0.4		NA		0.51		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.12		NA		0.16		NA	
	Chrysene	mg/kg	70	NS	NS	0.34		NA		0.42		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.13	U	NA		0.14	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.11		NA		0.12		NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.19		NA		0.25		NA	
	Fluorene	mg/kg	1,000	NS	NS	0.17	U	NA		0.18	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	0.46		NA		0.49		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	Indeno(1,2,3-cd)pyrene	mg/kg	7	NS	NS	0.2		NA		0.26		NA	
	Pyrene	mg/kg	1,000	NS	NS	0.61		NA		0.64		NA	
	Aniline	mg/kg	1,000	NS	NS	0.2	U	NA		0.22	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.17	U	NA		0.18	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.17	U	NA		0.18	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.076		NA		0.12		NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(8)-DC				GLC-VMF(20)-RCS-2-FILL(14)-DC			
						GLC-VMF(20)-RCS-2-FILL(8)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(8)-DC-VOC(1)		GLC-VMF(20)-RCS-2-FILL(14)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(14)-DC-VOC-3	
						Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*		
	Acetophenone	mg/kg	1,000	NS	NS	0.17	U	NA		0.18	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.07	U	NA		0.076	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.36	U	NA		0.39	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.23	U	NA		0.25	U	NA	
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.8	U	NA		0.87	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.33	U	NA		0.36	U	NA	
	Phenol	mg/kg	1	NS	NS	0.17	U	NA		0.18	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.17	U	NA		0.18	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	0.24	U	NA		0.26	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.17	U	NA		0.18	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.18	U	NA		0.2	U	NA	
	Total SVOCs	mg/kg	NS	100	100	3.826		NA		4.45		NA	
PCBs													
	Aroclor 1016	mg/kg	1	NS	NS	0.168	U	NA		0.0364	U	NA	
	Aroclor 1221	mg/kg	1	NS	NS	0.168	U	NA		0.0364	U	NA	
	Aroclor 1232	mg/kg	1	NS	NS	0.168	U	NA		0.0364	U	NA	
	Aroclor 1242	mg/kg	1	NS	NS	0.168	U	NA		0.0364	U	NA	
	Aroclor 1248	mg/kg	1	NS	NS	0.168	U	NA		0.0364	U	NA	
	Aroclor 1254	mg/kg	1	NS	NS	0.854		NA		0.0917		NA	
	Aroclor 1260	mg/kg	1	NS	NS	0.168	U	NA		0.0364	U	NA	
	Aroclor 1262	mg/kg	1	NS	NS	0.168	U	NA		0.0364	U	NA	
	Aroclor 1268	mg/kg	1	NS	NS	0.168	U	NA		0.0364	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.854		NA		0.0917		NA	
Pesticides													
	Delta-BHC	mg/kg	10	NS	NS	0.00154	U	NA		0.00172	U	NA	
	Lindane	mg/kg	0.003	NS	NS	0.000515	U	NA		0.000574	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	0.000644	U	NA		0.000718	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	0.00154	U	NA		0.00172	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	0.000773	U	NA		0.000861	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	0.00154	U	NA		0.00172	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.0029	U	NA		0.00323	U	NA	
	Endrin	mg/kg	10	NS	NS	0.000644	U	NA		0.000718	U	NA	
	Endrin ketone	mg/kg	NS	NS	NS	0.00154	U	NA		0.00172	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	0.000966	U	NA		0.00108	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	0.00154	U	NA		0.00172	U	NA	
	4,4'-DDD	mg/kg	8	NS	NS	0.00676		NA		0.00172	U	NA	
	4,4'-DDT	mg/kg	6	NS	NS	0.0156	IP	NA		0.00323	U	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	0.00154	U	NA		0.00172	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	0.00154	U	NA		0.00172	U	NA	
	Endosulfan sulfate	mg/kg	NS	NS	NS	0.000644	U	NA		0.000718	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	0.0029	U	NA		0.00323	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	0.0245	IP	NA		0.0144	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00154	U	NA		0.00172	U	NA	
Herbicides													
	MCP	mg/kg	NS	NS	NS	3.4	U	NA		3.6	U	NA	
	MCPA	mg/kg	100	NS	NS	3.4	U	NA		3.6	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	0.034	U	NA		0.036	U	NA	
	Dicamba	mg/kg	500	NS	NS	0.034	U	NA		0.036	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	0.034	U	NA		0.036	U	NA	
	2,4-D	mg/kg	100	NS	NS	0.034	U	NA		0.036	U	NA	
	2,4-DB	mg/kg	100	NS	NS	0.034	U	NA		0.036	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	0.034	U	NA		0.036	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.034	U	NA		0.036	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(8)-DC				GLC-VMF(20)-RCS-2-FILL(14)-DC			
						GLC-VMF(20)-RCS-2-FILL(8)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(8)-DC-VOC(1)		GLC-VMF(20)-RCS-2-FILL(14)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(14)-DC-VOC-3	
						L2052968-03		L2052968-04		L2053491-01		L2053491-02	
						11/30/2020		11/30/2020		12/2/2020		12/2/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
TPH													
	TPH (C10-C36)	mg/kg	1,000	2,500	5,000	86.4		NA		112		NA	
Metals, total													
	Antimony	mg/kg	20	NS	NS	2.05	U	NA		2.13	U	NA	
	Arsenic	mg/kg	20	40	40	5.16		NA		5.79		NA	
	Barium	mg/kg	1,000	NS	NS	36		NA		28.7		NA	
	Beryllium	mg/kg	90	NS	NS	0.217		NA		0.213	U	NA	
	Cadmium	mg/kg	70	30	80	0.553		NA		0.549		NA	
	Chromium	mg/kg	100	1,000	1,000	16.2		NA		14.3		NA	
	Lead	mg/kg	200	1,000	2,000	29.5		NA		28.2		NA	
	Mercury	mg/kg	20	10	10	0.093		NA		0.112		NA	
	Nickel	mg/kg	600	NS	NS	13.2		NA		12.2		NA	
	Selenium	mg/kg	400	NS	NS	2.05	U	NA		2.13	U	NA	
	Silver	mg/kg	100	NS	NS	0.41	U	NA		0.425	U	NA	
	Thallium	mg/kg	8	NS	NS	2.05	U	NA		2.13	U	NA	
	Vanadium	mg/kg	400	NS	NS	32.4		NA		29.8		NA	
	Zinc	mg/kg	1,000	NS	NS	53.8		NA		56.3		NA	
General Chemistry													
	Specific Conductance	umhos/cm	NS	4,000	8,000	95		NA		74		NA	
	pH	SU	NS	NS	NS	8.1		NA		8.4		NA	
	Cyanide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Sulfide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Ignitability		NS	NS	NS	NI		NA		NI		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

I - The lower value for the two columns has been reported due to obvious interference.

ND - Not detected.

NI - Not ignitable.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

P - The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

RC - Reportable concentration.

(1) - MassDEP RC for C9-C10 aromatics used.

(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.

(3) - MassDEP RC for Dichloropropane used.

(4) - MassDEP RC for Dichloropropene used.

(5) - MassDEP RC for Chlorotoluene used.

* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(13)- DC				GLC-VMF(20)-RCS-2-FILL(25)- DC			
						GLC-VMF(20)- RCS-2-FILL(13)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(13)- DC-VOC-6		GLC-VMF(20)- RCS-2-FILL(25)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(25)- DC-VOC-4	
						L2053491-03		L2053491-04		L2055561-03		L2055561-04	
						12/2/2020		12/2/2020		12/11/2020		12/11/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
VOCs													
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.0035	U	NA		0.0036	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.0007	U	NA		0.00073	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.001	U	NA		0.0011	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.0007	U	NA		0.00073	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.0007	U	NA		0.00073	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.0007	U	NA		0.00073	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.0007	U	NA		0.00073	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.00035	U	NA		0.00044	
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.00035	U	NA		0.00036	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.0028	U	NA		0.0029	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.0007	U	NA		0.00073	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.00035	U	NA		0.00036	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.00035	U	NA		0.00036	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.0007	U	NA		0.00073	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00035	U	NA		0.00036	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.00035	U	NA		0.00036	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	NA		0.00035	U	NA		0.00036	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.0028	U	NA		0.0029	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.00035	U	NA		0.00036	U
	Benzene	mg/kg	2	NS	NS	NA		0.00035	U	NA		0.00036	U
	Toluene	mg/kg	30	NS	NS	NA		0.0007	U	NA		0.00073	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.0007	U	NA		0.00073	U
	Chloromethane	mg/kg	100	NS	NS	NA		0.0028	U	NA		0.0029	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0014	U	NA		0.0015	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.0007	U	NA		0.00073	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.0007	U	NA		0.00073	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		0.001	U	NA		0.0011	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		0.00035	U	NA		0.00036	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.0014	U	NA		0.0015	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		0.0014	U	NA		0.0015	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	NA		0.0014	U	NA		0.0015	U
	o-Xylene	mg/kg	100(2)	NS	NS	NA		0.0007	U	NA		0.00073	U
	Xylenes, Total	mg/kg	100	NS	NS	NA		0.0007	U	NA		0.00073	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA		0.0007	U	NA		0.00073	U
	1,2-Dichloroethene, Total	mg/kg	0.3	NS	NS	NA		0.0007	U	NA		0.00073	U
	Dibromomethane	mg/kg	500	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.0015	U
	Styrene	mg/kg	3	NS	NS	NA		0.0007	U	NA		0.00073	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA		0.007	U	NA		0.0073	U
	Acetone	mg/kg	6	NS	NS	NA		0.017	U	NA		0.018	U
	Carbon disulfide	mg/kg	100	NS	NS	NA		0.007	U	NA		0.0073	U
	Methyl ethyl ketone	mg/kg	4	NS	NS	NA		0.007	U	NA		0.0073	U
	Methyl isobutyl ketone	mg/kg	0.4	NS	NS	NA		0.007	U	NA		0.0073	U
	2-Hexanone	mg/kg	100	NS	NS	NA		0.007	U	NA		0.0073	U
	Bromochloromethane	mg/kg	NS	NS	NS	NA		0.0014	U	NA		0.0015	U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA		0.0028	U	NA		0.0029	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA		0.0007	U	NA		0.00073	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA		0.00035	U	NA		0.00036	U
	Bromobenzene	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.0015	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.0007	U	NA		0.00073	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.0007	U	NA		0.00073	U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.0015	U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.0015	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	NA		0.0014	U	NA		0.0015	U

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(13)- DC				GLC-VMF(20)-RCS-2-FILL(25)- DC			
						GLC-VMF(20)- RCS-2-FILL(13)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(13)- DC-VOC-6		GLC-VMF(20)- RCS-2-FILL(25)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(25)- DC-VOC-4	
						L2053491-03		L2053491-04		L2055561-03		L2055561-04	
						12/2/2020		12/2/2020		12/11/2020		12/11/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA		0.0021	U	NA		0.0022	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.0028	U	NA		0.0029	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA		0.0007	U	NA		0.00073	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA		0.0007	U	NA		0.00073	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.0028	U	NA		0.0029	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.0007	U	NA		0.00073	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0014	U	NA		0.0015	U
	Diethyl ether	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.0015	U
	Diisopropyl Ether	mg/kg	100	NS	NS	NA		0.0014	U	NA		0.0015	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0014	U	NA		0.0015	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0014	U	NA		0.0015	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.056	U	NA		0.058	U
	Total VOCs	mg/kg	NS	4	10	NA		ND		NA		0.00044	
SVOCs													
	Acenaphthene	mg/kg	4	NS	NS	0.15	U	NA		0.14	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.18	U	NA		0.18	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.18	U	NA		0.18	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.18	U	NA		0.18	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.18	U	NA		0.18	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.18	U	NA		0.18	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.18	U	NA		0.18	U	NA	
	Azobenzene	mg/kg	50	NS	NS	0.18	U	NA		0.18	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	0.9		NA		1.3		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.18	U	NA		0.18	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.2	U	NA		0.19	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.18	U	NA		0.18	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.16	U	NA		0.16	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.37		NA		0.2		NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.16	U	NA		0.16	U	NA	
	Bis(2-ethylhexyl)phthalate	mg/kg	90	NS	NS	0.37		NA		0.18	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.18	U	NA		0.18	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.18	U	NA		0.18	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.18	U	NA		0.18	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.18	U	NA		0.18	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.48		NA		0.73		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.48		NA		0.61		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	0.6		NA		0.82		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.21		NA		0.21		NA	
	Chrysene	mg/kg	70	NS	NS	0.48		NA		0.68		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.15	U	NA		0.14	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.17		NA		0.27		NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.28		NA		0.38		NA	
	Fluorene	mg/kg	1,000	NS	NS	0.18	U	NA		0.18	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	0.67		NA		0.84		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.077	U	NA		0.092		NA	
	Indeno(1,2,3-cd)pyrene	mg/kg	7	NS	NS	0.31		NA		0.37		NA	
	Pyrene	mg/kg	1,000	NS	NS	0.79		NA		1.2		NA	
	Aniline	mg/kg	1,000	NS	NS	0.22	U	NA		0.21	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.18	U	NA		0.18	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.18	U	NA		0.18	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.2		NA		0.12		NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(13)- DC				GLC-VMF(20)-RCS-2-FILL(25)- DC			
						GLC-VMF(20)- RCS-2-FILL(13)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(13)- DC-VOC-6		GLC-VMF(20)- RCS-2-FILL(25)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(25)- DC-VOC-4	
						L2053491-03		L2053491-04		L2055561-03		L2055561-04	
						12/2/2020		12/2/2020		12/11/2020		12/11/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	Acetophenone	mg/kg	1,000	NS	NS	0.18	U	NA		0.18	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.074	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.4	U	NA		0.38	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.26	U	NA		0.25	U	NA	
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.88	U	NA		0.85	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.37	U	NA		0.35	U	NA	
	Phenol	mg/kg	1	NS	NS	0.18	U	NA		0.18	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.18	U	NA		0.18	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	0.26	U	NA		0.25	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.18	U	NA		0.18	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.2	U	NA		0.19	U	NA	
	Total SVOCs	mg/kg	NS	100	100	6.31		NA		7.822		NA	
PCBs													
	Aroclor 1016	mg/kg	1	NS	NS	0.0367	U	NA		0.0346	U	NA	
	Aroclor 1221	mg/kg	1	NS	NS	0.0367	U	NA		0.0346	U	NA	
	Aroclor 1232	mg/kg	1	NS	NS	0.0367	U	NA		0.0346	U	NA	
	Aroclor 1242	mg/kg	1	NS	NS	0.0367	U	NA		0.0346	U	NA	
	Aroclor 1248	mg/kg	1	NS	NS	0.0367	U	NA		0.0346	U	NA	
	Aroclor 1254	mg/kg	1	NS	NS	0.359		NA		0.389		NA	
	Aroclor 1260	mg/kg	1	NS	NS	0.0367	U	NA		0.0346	U	NA	
	Aroclor 1262	mg/kg	1	NS	NS	0.0367	U	NA		0.0346	U	NA	
	Aroclor 1268	mg/kg	1	NS	NS	0.0367	U	NA		0.0346	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.359		NA		0.389		NA	
Pesticides													
	Delta-BHC	mg/kg	10	NS	NS	0.00169	U	NA		0.00168	U	NA	
	Lindane	mg/kg	0.003	NS	NS	0.000564	U	NA		0.000559	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	0.000706	U	NA		0.000699	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	0.00169	U	NA		0.00168	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	0.000847	U	NA		0.000839	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	0.00169	U	NA		0.00168	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.00318	U	NA		0.00315	U	NA	
	Endrin	mg/kg	10	NS	NS	0.000706	U	NA		0.000699	U	NA	
	Endrin ketone	mg/kg	NS	NS	NS	0.00169	U	NA		0.00168	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	0.00106	U	NA		0.00105	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	0.00169	U	NA		0.00168	U	NA	
	4,4'-DDD	mg/kg	8	NS	NS	0.00169	U	NA		0.00606		NA	
	4,4'-DDT	mg/kg	6	NS	NS	0.00318	U	NA		0.00315	U	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	0.00169	U	NA		0.00168	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	0.00169	U	NA		0.00168	U	NA	
	Endosulfan sulfate	mg/kg	NS	NS	NS	0.000706	U	NA		0.000699	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	0.00318	U	NA		0.00315	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	0.0141	U	NA		0.014	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00169	U	NA		0.00168	U	NA	
Herbicides													
	MCP	mg/kg	NS	NS	NS	3.7	U	NA		3.6	U	NA	
	MCPA	mg/kg	100	NS	NS	3.7	U	NA		3.6	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	0.037	U	NA		0.036	U	NA	
	Dicamba	mg/kg	500	NS	NS	0.037	U	NA		0.036	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	0.037	U	NA		0.036	U	NA	
	2,4-D	mg/kg	100	NS	NS	0.037	U	NA		0.036	U	NA	
	2,4-DB	mg/kg	100	NS	NS	0.037	U	NA		0.036	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	0.037	U	NA		0.036	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.037	U	NA		0.036	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(13)-DC				GLC-VMF(20)-RCS-2-FILL(25)-DC			
						GLC-VMF(20)-RCS-2-FILL(13)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(13)-DC-VOC-6		GLC-VMF(20)-RCS-2-FILL(25)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(25)-DC-VOC-4	
						L2053491-03		L2053491-04		L2055561-03		L2055561-04	
						12/2/2020		12/2/2020		12/11/2020		12/11/2020	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
TPH													
	TPH (C10-C36)	mg/kg	1,000	2,500	5,000	130		NA		59.8		NA	
Metals, total													
	Antimony	mg/kg	20	NS	NS	2.17	U	NA		2.12	U	NA	
	Arsenic	mg/kg	20	40	40	7.58		NA		3.61		NA	
	Barium	mg/kg	1,000	NS	NS	37.3		NA		42.6		NA	
	Beryllium	mg/kg	90	NS	NS	0.217		NA		0.212	U	NA	
	Cadmium	mg/kg	70	30	80	0.596		NA		0.658		NA	
	Chromium	mg/kg	100	1,000	1,000	13.6		NA		19.6		NA	
	Lead	mg/kg	200	1,000	2,000	37.5		NA		27.1		NA	
	Mercury	mg/kg	20	10	10	0.1		NA		0.107		NA	
	Nickel	mg/kg	600	NS	NS	13.5		NA		15.2		NA	
	Selenium	mg/kg	400	NS	NS	2.17	U	NA		2.12	U	NA	
	Silver	mg/kg	100	NS	NS	0.435	U	NA		0.424	U	NA	
	Thallium	mg/kg	8	NS	NS	2.17	U	NA		2.12	U	NA	
	Vanadium	mg/kg	400	NS	NS	32.4		NA		37.4		NA	
	Zinc	mg/kg	1,000	NS	NS	73.1		NA		61.5		NA	
General Chemistry													
	Specific Conductance	umhos/cm	NS	4,000	8,000	82		NA		100		NA	
	pH	SU	NS	NS	NS	7.8		NA		8		NA	
	Cyanide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Sulfide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Ignitability		NS	NS	NS	NI		NA		NI		NA	

Notes:
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
su - Standard unit.
umhos/cm - Micro-mhos per centimeter.
I - The lower value for the two columns has been reported due to obvious interference.
ND - Not detected.
NI - Not ignitable.
NA - Sample not analyzed for the listed analyte.
NS - No MassDEP standards exist for this analyte.
P - The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.
U - Analyte was not detected at specified quantitation limit.
Values in **bold** indicate the analyte was detected.
VOCs - Volatile Organic Compounds.
SVOCs - Semivolatile Organic Compounds.
PCBs - Polychlorinated Biphenyls.
TPH - Total Petroleum Hydrocarbons.
RC - Reportable concentration.
(1) - MassDEP RC for C9-C10 aromatics used.
(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.
(3) - MassDEP RC for Dichloropropane used.
(4) - MassDEP RC for Dichloropropene used.
(5) - MassDEP RC for Chlorotoluene used.
* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-YL21-VAC-121420-DC				GLC-VMF(20)-RCS-2-FILL(29)-DC			
						GLC-YL21-VAC-121420-DC-COMP		GLC-YL21-VAC-121420-DC-VOC-2		GLC-VMF(20)-RCS-2-FILL(29)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(29)-DC-VOC-5	
						L2056554-03		L2056554-04		L2101324-01		L2101324-02	
						12/14/2020		12/14/2020		1/11/2021		1/11/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
VOCs													
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.0032	U	NA		0.0039	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.00065	U	NA		0.00078	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.00097	U	NA		0.0012	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.00065	U	NA		0.00078	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.00065	U	NA		0.00078	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.00065	U	NA		0.00078	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.00065	U	NA		0.00078	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.012		NA		0.00049	
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.00032	U	NA		0.00039	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.0026	U	NA		0.0031	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.00065	U	NA		0.00078	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.00032	U	NA		0.00039	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.00032	U	NA		0.00039	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00065	U	NA		0.00078	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00032	U	NA		0.00039	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.00032	U	NA		0.00039	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	NA		0.00032	U	NA		0.00039	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.0026	U	NA		0.0031	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.00032	U	NA		0.00039	U
	Benzene	mg/kg	2	NS	NS	NA		0.00032	U	NA		0.00039	U
	Toluene	mg/kg	30	NS	NS	NA		0.00065	U	NA		0.00079	
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.00065	U	NA		0.00078	U
	Chloromethane	mg/kg	100	NS	NS	NA		0.0026	U	NA		0.0031	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0013	U	NA		0.0016	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.00065	U	NA		0.00078	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.00065	U	NA		0.00078	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		0.00097	U	NA		0.0012	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		0.0015		NA		0.00039	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.0013	U	NA		0.0016	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		0.0013	U	NA		0.0016	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	NA		0.0013	U	NA		0.0016	U
	o-Xylene	mg/kg	100(2)	NS	NS	NA		0.00065	U	NA		0.00078	U
	Xylenes, Total	mg/kg	100	NS	NS	NA		0.00065	U	NA		0.00078	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA		0.0016		NA		0.00078	U
	1,2-Dichloroethene, Total	mg/kg	0.3	NS	NS	NA		0.0016		NA		0.00078	U
	Dibromomethane	mg/kg	500	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA		0.0013	U	NA		0.0016	U
	Styrene	mg/kg	3	NS	NS	NA		0.00065	U	NA		0.00078	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA		0.0065	U	NA		0.0078	U
	Acetone	mg/kg	6	NS	NS	NA		0.021		NA		0.022	
	Carbon disulfide	mg/kg	100	NS	NS	NA		0.0065	U	NA		0.0078	U
	Methyl ethyl ketone	mg/kg	4	NS	NS	NA		0.0065	U	NA		0.0078	U
	Methyl isobutyl ketone	mg/kg	0.4	NS	NS	NA		0.0065	U	NA		0.0078	U
	2-Hexanone	mg/kg	100	NS	NS	NA		0.0065	U	NA		0.0078	U
	Bromochloromethane	mg/kg	NS	NS	NS	NA		0.0013	U	NA		0.0016	U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA		0.0026	U	NA		0.0031	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA		0.00065	U	NA		0.00078	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA		0.00032	U	NA		0.00039	U
	Bromobenzene	mg/kg	100	NS	NS	NA		0.0013	U	NA		0.0016	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00065	U	NA		0.00078	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00065	U	NA		0.00078	U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA		0.0013	U	NA		0.0016	U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA		0.0013	U	NA		0.0016	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	NA		0.0013	U	NA		0.0016	U

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-YL21-VAC-121420-DC				GLC-VMF(20)-RCS-2-FILL(29)-DC			
						GLC-YL21-VAC-121420-DC-COMP		GLC-YL21-VAC-121420-DC-VOC-2		GLC-VMF(20)-RCS-2-FILL(29)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(29)-DC-VOC-5	
						L2056554-03		L2056554-04		L2101324-01		L2101324-02	
						12/14/2020		12/14/2020		1/11/2021		1/11/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA		0.0019	U	NA		0.0023	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.0026	U	NA		0.0031	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA		0.00065	U	NA		0.00078	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA		0.00065	U	NA		0.00078	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.0026	U	NA		0.0031	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.00065	U	NA		0.00078	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0013	U	NA		0.0016	U
	Diethyl ether	mg/kg	100	NS	NS	NA		0.0013	U	NA		0.0016	U
	Diisopropyl Ether	mg/kg	100	NS	NS	NA		0.0013	U	NA		0.0016	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0013	U	NA		0.0016	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0013	U	NA		0.0016	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.052	U	NA		0.062	U
	Total VOCs	mg/kg	NS	4	10	NA		0.0361		NA		0.02328	
SVOCs													
	Acenaphthene	mg/kg	4	NS	NS	0.14	U	NA		0.14	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.18	U	NA		0.18	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.18	U	NA		0.18	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.18	U	NA		0.18	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.18	U	NA		0.18	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.18	U	NA		0.18	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.18	U	NA		0.18	U	NA	
	Azobenzene	mg/kg	50	NS	NS	0.18	U	NA		0.18	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	1.2		NA		0.29		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.18	U	NA		0.18	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.19	U	NA		0.19	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.18	U	NA		0.18	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.16	U	NA		0.16	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.18	U	NA		0.18	U	NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.16	U	NA		0.16	U	NA	
	Bis(2-ethylhexyl)phthalate	mg/kg	90	NS	NS	0.29		NA		0.18	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.18	U	NA		0.18	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.18	U	NA		0.18	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.18	U	NA		0.18	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.18	U	NA		0.18	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.54		NA		0.16		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.56		NA		0.14	U	NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	0.74		NA		0.15		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.24		NA		0.1	U	NA	
	Chrysene	mg/kg	70	NS	NS	0.6		NA		0.15		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.14	U	NA		0.14	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.16		NA		0.1	U	NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.35		NA		0.14	U	NA	
	Fluorene	mg/kg	1,000	NS	NS	0.18	U	NA		0.18	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	0.68		NA		0.22		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.084		NA		0.074	U	NA	
	Indeno(1,2,3-cd)pyrene	mg/kg	7	NS	NS	0.38		NA		0.14	U	NA	
	Pyrene	mg/kg	1,000	NS	NS	1		NA		0.26		NA	
	Aniline	mg/kg	1,000	NS	NS	0.22	U	NA		0.21	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.18	U	NA		0.18	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.18	U	NA		0.18	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-YL21-VAC-121420-DC				GLC-VMF(20)-RCS-2-FILL(29)-DC			
						GLC-YL21-VAC-121420-DC-COMP		GLC-YL21-VAC-121420-DC-VOC-2		GLC-VMF(20)-RCS-2-FILL(29)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(29)-DC-VOC-5	
						L2056554-03		L2056554-04		L2101324-01		L2101324-02	
						12/14/2020		12/14/2020		1/11/2021		1/11/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	Acetophenone	mg/kg	1,000	NS	NS	0.18	U	NA		0.18	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.075	U	NA		0.074	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.39	U	NA		0.38	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.25	U	NA		0.25	U	NA	
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.86	U	NA		0.85	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.36	U	NA		0.35	U	NA	
	Phenol	mg/kg	1	NS	NS	0.18	U	NA		0.18	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.18	U	NA		0.18	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	0.26	U	NA		0.25	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.18	U	NA		0.18	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.19	U	NA		0.19	U	NA	
	Total SVOCs	mg/kg	NS	100	100	6.824		NA		1.23		NA	
PCBs													
	Aroclor 1016	mg/kg	1	NS	NS	0.0368	U	NA		0.0352	U	NA	
	Aroclor 1221	mg/kg	1	NS	NS	0.0368	U	NA		0.0352	U	NA	
	Aroclor 1232	mg/kg	1	NS	NS	0.0368	U	NA		0.0352	U	NA	
	Aroclor 1242	mg/kg	1	NS	NS	0.0368	U	NA		0.0352	U	NA	
	Aroclor 1248	mg/kg	1	NS	NS	0.0368	U	NA		0.0352	U	NA	
	Aroclor 1254	mg/kg	1	NS	NS	0.0368	U	NA		0.0748		NA	
	Aroclor 1260	mg/kg	1	NS	NS	0.0368	U	NA		0.0352	U	NA	
	Aroclor 1262	mg/kg	1	NS	NS	0.0368	U	NA		0.0352	U	NA	
	Aroclor 1268	mg/kg	1	NS	NS	0.0368	U	NA		0.0352	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.0368	U	NA		0.0748		NA	
Pesticides													
	Delta-BHC	mg/kg	10	NS	NS	0.00175	U	NA		0.00161	U	NA	
	Lindane	mg/kg	0.003	NS	NS	0.000582	U	NA		0.000537	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	0.000728	U	NA		0.000672	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	0.00175	U	NA		0.00161	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	0.000873	U	NA		0.000806	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	0.00175	U	NA		0.00161	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.00327	U	NA		0.00302	U	NA	
	Endrin	mg/kg	10	NS	NS	0.000728	U	NA		0.000672	U	NA	
	Endrin ketone	mg/kg	NS	NS	NS	0.00175	U	NA		0.00161	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	0.00109	U	NA		0.00101	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	0.00175	U	NA		0.00265		NA	
	4,4'-DDD	mg/kg	8	NS	NS	0.00299	P	NA		0.0025		NA	
	4,4'-DDT	mg/kg	6	NS	NS	0.00328	P	NA		0.0103	IP	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	0.00175	U	NA		0.00161	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	0.00175	U	NA		0.00161	U	NA	
	Endosulfan sulfate	mg/kg	NS	NS	NS	0.000728	U	NA		0.000672	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	0.00327	U	NA		0.00302	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	0.0146	U	NA		0.0134	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00175	U	NA		0.00161	U	NA	
Herbicides													
	MCP	mg/kg	NS	NS	NS	3.7	U	NA		3.5	U	NA	
	MCPA	mg/kg	100	NS	NS	3.7	U	NA		3.5	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	0.037	U	NA		0.035	U	NA	
	Dicamba	mg/kg	500	NS	NS	0.037	U	NA		0.035	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4-D	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4-DB	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-YL21-VAC-121420-DC				GLC-VMF(20)-RCS-2-FILL(29)-DC			
						GLC-YL21-VAC-121420-DC-COMP		GLC-YL21-VAC-121420-DC-VOC-2		GLC-VMF(20)-RCS-2-FILL(29)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(29)-DC-VOC-5	
						L2056554-03		L2056554-04		L2101324-01		L2101324-02	
						12/14/2020		12/14/2020		1/11/2021		1/11/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
TPH													
	TPH (C10-C36)	mg/kg	1,000	2,500	5,000	164		NA		48		NA	
Metals, total													
	Antimony	mg/kg	20	NS	NS	2.14	U	NA		2.07	U	NA	
	Arsenic	mg/kg	20	40	40	4.2		NA		5.32		NA	
	Barium	mg/kg	1,000	NS	NS	26.8		NA		28		NA	
	Beryllium	mg/kg	90	NS	NS	0.214	U	NA		0.249		NA	
	Cadmium	mg/kg	70	30	80	0.582		NA		0.431		NA	
	Chromium	mg/kg	100	1,000	1,000	22.4		NA		11		NA	
	Lead	mg/kg	200	1,000	2,000	40		NA		20.3		NA	
	Mercury	mg/kg	20	10	10	0.077	U	NA		0.079	U	NA	
	Nickel	mg/kg	600	NS	NS	12.4		NA		9.76		NA	
	Selenium	mg/kg	400	NS	NS	2.14	U	NA		2.07	U	NA	
	Silver	mg/kg	100	NS	NS	0.428	U	NA		0.415	U	NA	
	Thallium	mg/kg	8	NS	NS	2.14	U	NA		2.07	U	NA	
	Vanadium	mg/kg	400	NS	NS	35.1		NA		21.1		NA	
	Zinc	mg/kg	1,000	NS	NS	60.9		NA		38.6		NA	
General Chemistry													
	Specific Conductance	umhos/cm	NS	4,000	8,000	58		NA		78		NA	
	pH	SU	NS	NS	NS	8.4		NA		8.6		NA	
	Cyanide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Sulfide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Ignitability		NS	NS	NS	NI		NA		NI		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

I - The lower value for the two columns has been reported due to obvious interference.

ND - Not detected.

NI - Not ignitable.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

P - The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

RC - Reportable concentration.

(1) - MassDEP RC for C9-C10 aromatics used.

(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.

(3) - MassDEP RC for Dichloropropane used.

(4) - MassDEP RC for Dichloropropene used.

(5) - MassDEP RC for Chlorotoluene used.

* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(30)- DC				GLC-VMF(48)-RCS-2-FILL(21)- DC			
						GLC-VMF(20)- RCS-2-FILL(30)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(30)- DC-VOC-4		GLC-VMF(48)- RCS-2-FILL(21)- DC-COMP		GLC-VMF(48)- RCS-2-FILL(21)- DC-VOC-7	
						L2101324-03		L2101324-04		L2101324-09		L2101324-10	
						1/11/2021		1/11/2021		1/11/2021		1/11/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
VOCs													
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.0037	U	NA		0.0038	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.00075	U	NA		0.00076	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.0011	U	NA		0.0011	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.00075	U	NA		0.00076	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.00075	U	NA		0.00076	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.00075	U	NA		0.00076	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.00075	U	NA		0.00076	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.00087		NA		0.00067	
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.00037	U	NA		0.00038	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.003	U	NA		0.003	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.00075	U	NA		0.00076	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.00037	U	NA		0.00038	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.00037	U	NA		0.00038	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00075	U	NA		0.00076	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00037	U	NA		0.00038	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.00037	U	NA		0.00038	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	NA		0.00037	U	NA		0.00038	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.003	U	NA		0.003	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.00037	U	NA		0.00038	U
	Benzene	mg/kg	2	NS	NS	NA		0.00037	U	NA		0.00038	U
	Toluene	mg/kg	30	NS	NS	NA		0.00089		NA		0.00076	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.00075	U	NA		0.00076	U
	Chloromethane	mg/kg	100	NS	NS	NA		0.003	U	NA		0.003	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0015	U	NA		0.0015	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.00075	U	NA		0.00076	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.00075	U	NA		0.00076	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		0.0011	U	NA		0.0011	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		0.00037	U	NA		0.00038	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.0015	U	NA		0.0015	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		0.0015	U	NA		0.0015	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	NA		0.0015	U	NA		0.0015	U
	o-Xylene	mg/kg	100(2)	NS	NS	NA		0.00075	U	NA		0.00076	U
	Xylenes, Total	mg/kg	100	NS	NS	NA		0.00075	U	NA		0.00076	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA		0.00075	U	NA		0.00076	U
	1,2-Dichloroethene, Total	mg/kg	0.3	NS	NS	NA		0.00075	U	NA		0.00076	U
	Dibromomethane	mg/kg	500	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0015	U
	Styrene	mg/kg	3	NS	NS	NA		0.00075	U	NA		0.00076	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA		0.0075	U	NA		0.0076	U
	Acetone	mg/kg	6	NS	NS	NA		0.045		NA		0.019	U
	Carbon disulfide	mg/kg	100	NS	NS	NA		0.0075	U	NA		0.0076	U
	Methyl ethyl ketone	mg/kg	4	NS	NS	NA		0.0075	U	NA		0.0076	U
	Methyl isobutyl ketone	mg/kg	0.4	NS	NS	NA		0.0075	U	NA		0.0076	U
	2-Hexanone	mg/kg	100	NS	NS	NA		0.0075	U	NA		0.0076	U
	Bromochloromethane	mg/kg	NS	NS	NS	NA		0.0015	U	NA		0.0015	U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA		0.003	U	NA		0.003	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA		0.00075	U	NA		0.00076	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA		0.00037	U	NA		0.00038	U
	Bromobenzene	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0015	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00075	U	NA		0.00076	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00075	U	NA		0.00076	U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0015	U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0015	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	NA		0.0015	U	NA		0.0015	U

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(30)-DC				GLC-VMF(48)-RCS-2-FILL(21)-DC			
						GLC-VMF(20)-RCS-2-FILL(30)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(30)-DC-VOC-4		GLC-VMF(48)-RCS-2-FILL(21)-DC-COMP		GLC-VMF(48)-RCS-2-FILL(21)-DC-VOC-7	
						L2101324-03		L2101324-04		L2101324-09		L2101324-10	
						1/11/2021		1/11/2021		1/11/2021		1/11/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA		0.0022	U	NA		0.0023	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.003	U	NA		0.003	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA		0.00075	U	NA		0.00076	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA		0.00075	U	NA		0.00076	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.003	U	NA		0.003	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.00075	U	NA		0.00076	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0015	U	NA		0.0015	U
	Diethyl ether	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0015	U
	Diisopropyl Ether	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0015	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0015	U	NA		0.0015	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0015	U	NA		0.0015	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.06	U	NA		0.061	U
	Total VOCs	mg/kg	NS	4	10	NA		0.04676		NA		0.00067	
SVOCs													
	Acenaphthene	mg/kg	4	NS	NS	0.14	U	NA		0.14	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.18	U	NA		0.17	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.18	U	NA		0.17	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.18	U	NA		0.17	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.18	U	NA		0.17	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Azobenzene	mg/kg	50	NS	NS	0.18	U	NA		0.17	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	0.66		NA		0.87		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.19	U	NA		0.18	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.18	U	NA		0.17	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.16	U	NA		0.15	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.18	U	NA		0.17	U	NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.16	U	NA		0.15	U	NA	
	Bis(2-ethylhexyl)phthalate	mg/kg	90	NS	NS	0.18	U	NA		0.17	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.18	U	NA		0.17	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.18	U	NA		0.17	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.38		NA		0.38		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.28		NA		0.34		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	0.37		NA		0.46		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.13		NA		0.15		NA	
	Chrysene	mg/kg	70	NS	NS	0.34		NA		0.42		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.14	U	NA		0.14	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.14		NA		0.25		NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.14		NA		0.21		NA	
	Fluorene	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	0.57		NA		0.53		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	Indeno(1,2,3-cd)pyrene	mg/kg	7	NS	NS	0.14		NA		0.21		NA	
	Pyrene	mg/kg	1,000	NS	NS	0.6		NA		0.73		NA	
	Aniline	mg/kg	1,000	NS	NS	0.21	U	NA		0.2	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.18	U	NA		0.17	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.078		NA		0.11		NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(30)- DC				GLC-VMF(48)-RCS-2-FILL(21)- DC			
						GLC-VMF(20)- RCS-2-FILL(30)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(30)- DC-VOC-4		GLC-VMF(48)- RCS-2-FILL(21)- DC-COMP		GLC-VMF(48)- RCS-2-FILL(21)- DC-VOC-7	
						L2101324-03		L2101324-04		L2101324-09		L2101324-10	
						1/11/2021		1/11/2021		1/11/2021		1/11/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	Acetophenone	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.074	U	NA		0.072	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.38	U	NA		0.37	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.24	U	NA		0.24	U	NA	
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.84	U	NA		0.82	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.35	U	NA		0.34	U	NA	
	Phenol	mg/kg	1	NS	NS	0.18	U	NA		0.17	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.18	U	NA		0.17	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	0.25	U	NA		0.25	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.18	U	NA		0.17	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.19	U	NA		0.18	U	NA	
	Total SVOCs	mg/kg	NS	100	100	3.828		NA		4.66		NA	
PCBs													
	Aroclor 1016	mg/kg	1	NS	NS	0.0352	U	NA		0.0334	U	NA	
	Aroclor 1221	mg/kg	1	NS	NS	0.0352	U	NA		0.0334	U	NA	
	Aroclor 1232	mg/kg	1	NS	NS	0.0352	U	NA		0.0334	U	NA	
	Aroclor 1242	mg/kg	1	NS	NS	0.0352	U	NA		0.0334	U	NA	
	Aroclor 1248	mg/kg	1	NS	NS	0.0904		NA		0.0334	U	NA	
	Aroclor 1254	mg/kg	1	NS	NS	0.148		NA		0.0394		NA	
	Aroclor 1260	mg/kg	1	NS	NS	0.0352	U	NA		0.0334	U	NA	
	Aroclor 1262	mg/kg	1	NS	NS	0.0352	U	NA		0.0334	U	NA	
	Aroclor 1268	mg/kg	1	NS	NS	0.0352	U	NA		0.0334	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.238		NA		0.0394		NA	
Pesticides													
	Delta-BHC	mg/kg	10	NS	NS	0.0017	U	NA		0.00166	U	NA	
	Lindane	mg/kg	0.003	NS	NS	0.000565	U	NA		0.000552	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	0.000706	U	NA		0.00069	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	0.0017	U	NA		0.00166	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	0.000848	U	NA		0.000828	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	0.0017	U	NA		0.00166	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.00318	U	NA		0.0031	U	NA	
	Endrin	mg/kg	10	NS	NS	0.000706	U	NA		0.00069	U	NA	
	Endrin ketone	mg/kg	NS	NS	NS	0.0017	U	NA		0.00166	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	0.00106	U	NA		0.00103	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	0.0017	U	NA		0.00166	U	NA	
	4,4'-DDD	mg/kg	8	NS	NS	0.00273		NA		0.00166	U	NA	
	4,4'-DDT	mg/kg	6	NS	NS	0.00483	IP	NA		0.0031	U	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	0.0017	U	NA		0.00166	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	0.0017	U	NA		0.00166	U	NA	
	Endosulfan sulfate	mg/kg	NS	NS	NS	0.000706	U	NA		0.00069	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	0.00318	U	NA		0.0031	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	0.0141	U	NA		0.0138	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.0017	U	NA		0.00166	U	NA	
Herbicides													
	MCP	mg/kg	NS	NS	NS	3.5	U	NA		3.4	U	NA	
	MCPA	mg/kg	100	NS	NS	3.5	U	NA		3.4	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	0.035	U	NA		0.034	U	NA	
	Dicamba	mg/kg	500	NS	NS	0.035	U	NA		0.034	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	0.035	U	NA		0.034	U	NA	
	2,4-D	mg/kg	100	NS	NS	0.035	U	NA		0.034	U	NA	
	2,4-DB	mg/kg	100	NS	NS	0.035	U	NA		0.034	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	0.035	U	NA		0.034	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.035	U	NA		0.034	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(30)-DC				GLC-VMF(48)-RCS-2-FILL(21)-DC			
						GLC-VMF(20)-RCS-2-FILL(30)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(30)-DC-VOC-4		GLC-VMF(48)-RCS-2-FILL(21)-DC-COMP		GLC-VMF(48)-RCS-2-FILL(21)-DC-VOC-7	
						L2101324-03		L2101324-04		L2101324-09		L2101324-10	
						1/11/2021		1/11/2021		1/11/2021		1/11/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
TPH													
	TPH (C10-C36)	mg/kg	1,000	2,500	5,000	73.7		NA		34.5	U	NA	
Metals, total													
	Antimony	mg/kg	20	NS	NS	2.11	U	NA		2.06	U	NA	
	Arsenic	mg/kg	20	40	40	6.09		NA		4.28		NA	
	Barium	mg/kg	1,000	NS	NS	31.7		NA		27.9		NA	
	Beryllium	mg/kg	90	NS	NS	0.211	U	NA		0.206	U	NA	
	Cadmium	mg/kg	70	30	80	0.598		NA		0.556		NA	
	Chromium	mg/kg	100	1,000	1,000	13.9		NA		15.9		NA	
	Lead	mg/kg	200	1,000	2,000	34.7		NA		25.2		NA	
	Mercury	mg/kg	20	10	10	0.146		NA		0.162		NA	
	Nickel	mg/kg	600	NS	NS	12.9		NA		11.7		NA	
	Selenium	mg/kg	400	NS	NS	2.11	U	NA		2.06	U	NA	
	Silver	mg/kg	100	NS	NS	0.422	U	NA		0.412	U	NA	
	Thallium	mg/kg	8	NS	NS	2.11	U	NA		2.06	U	NA	
	Vanadium	mg/kg	400	NS	NS	26.4		NA		34.8		NA	
	Zinc	mg/kg	1,000	NS	NS	60.3		NA		44.8		NA	
General Chemistry													
	Specific Conductance	umhos/cm	NS	4,000	8,000	110		NA		96		NA	
	pH	SU	NS	NS	NS	9.8		NA		8.2		NA	
	Cyanide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Sulfide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Ignitability		NS	NS	NS	NI		NA		NI		NA	

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

I - The lower value for the two columns has been reported due to obvious interference.

ND - Not detected.

NI - Not ignitable.

NA - Sample not analyzed for the listed analyte.

NS - No MassDEP standards exist for this analyte.

P - The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in **bold** indicate the analyte was detected.

VOCs - Volatile Organic Compounds.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

TPH - Total Petroleum Hydrocarbons.

RC - Reportable concentration.

(1) - MassDEP RC for C9-C10 aromatics used.

(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.

(3) - MassDEP RC for Dichloropropane used.

(4) - MassDEP RC for Dichloropropene used.

(5) - MassDEP RC for Chlorotoluene used.

* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(12)- DC				GLC-VMF(20)-RCS-1-FILL(9)- DC			
						GLC-VMF(20)- RCS-2-FILL(12)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(12)- DC-VOC-5		GLC-VMF(20)- RCS-1-FILL(9)- DC-COMP		GLC-VMF(20)- RCS-1-FILL(9)- DC-VOC-6	
						L2101885-03		L2101885-04		L2103654-05		L2103654-06	
						1/13/2021		1/13/2021		1/22/2021		1/22/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
VOCs													
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.0037	U	NA		0.0034	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.00074	U	NA		0.00067	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.0011	U	NA		0.001	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.00074	U	NA		0.00067	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.00074	U	NA		0.00067	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.00074	U	NA		0.00067	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.00074	U	NA		0.00067	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.00062		NA		0.00046	
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.00037	U	NA		0.00034	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.0029	U	NA		0.0027	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.00074	U	NA		0.00067	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.00037	U	NA		0.00034	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.00037	U	NA		0.00034	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00074	U	NA		0.00067	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00037	U	NA		0.00034	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.00037	U	NA		0.00034	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	NA		0.00037	U	NA		0.00034	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.0029	U	NA		0.0027	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.00037	U	NA		0.00034	U
	Benzene	mg/kg	2	NS	NS	NA		0.00037	U	NA		0.00034	U
	Toluene	mg/kg	30	NS	NS	NA		0.00074	U	NA		0.00067	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.00074	U	NA		0.00067	U
	Chloromethane	mg/kg	100	NS	NS	NA		0.0029	U	NA		0.0027	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0015	U	NA		0.0013	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.00074	U	NA		0.00067	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.00074	U	NA		0.00067	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		0.0011	U	NA		0.001	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		0.00037	U	NA		0.00034	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.0015	U	NA		0.0013	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		0.0015	U	NA		0.0013	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	NA		0.0015	U	NA		0.0013	U
	o-Xylene	mg/kg	100(2)	NS	NS	NA		0.00074	U	NA		0.00067	U
	Xylenes, Total	mg/kg	100	NS	NS	NA		0.00074	U	NA		0.00067	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA		0.00074	U	NA		0.00067	U
	1,2-Dichloroethene, Total	mg/kg	0.3	NS	NS	NA		0.00074	U	NA		0.00067	U
	Dibromomethane	mg/kg	500	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0013	U
	Styrene	mg/kg	3	NS	NS	NA		0.00074	U	NA		0.00067	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA		0.0074	U	NA		0.0067	U
	Acetone	mg/kg	6	NS	NS	NA		0.018		NA		0.017	U
	Carbon disulfide	mg/kg	100	NS	NS	NA		0.0074	U	NA		0.0067	U
	Methyl ethyl ketone	mg/kg	4	NS	NS	NA		0.0074	U	NA		0.0067	U
	Methyl isobutyl ketone	mg/kg	0.4	NS	NS	NA		0.0074	U	NA		0.0067	U
	2-Hexanone	mg/kg	100	NS	NS	NA		0.0074	U	NA		0.0067	U
	Bromochloromethane	mg/kg	NS	NS	NS	NA		0.0015	U	NA		0.0013	U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA		0.0029	U	NA		0.0027	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA		0.00074	U	NA		0.00067	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA		0.00037	U	NA		0.00034	U
	Bromobenzene	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0013	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00074	U	NA		0.00067	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00074	U	NA		0.00067	U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0013	U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0013	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	NA		0.0015	U	NA		0.0013	U

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(12)-DC				GLC-VMF(20)-RCS-1-FILL(9)-DC			
						GLC-VMF(20)-RCS-2-FILL(12)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(12)-DC-VOC-5		GLC-VMF(20)-RCS-1-FILL(9)-DC-COMP		GLC-VMF(20)-RCS-1-FILL(9)-DC-VOC-6	
						L2101885-03		L2101885-04		L2103654-05		L2103654-06	
						1/13/2021		1/13/2021		1/22/2021		1/22/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA		0.0022	U	NA		0.002	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.0029	U	NA		0.0027	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA		0.00074	U	NA		0.00067	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA		0.00074	U	NA		0.00067	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.0029	U	NA		0.0027	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.00074	U	NA		0.00067	U
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0015	U	NA		0.0013	U
	Diethyl ether	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0013	U
	Diisopropyl Ether	mg/kg	100	NS	NS	NA		0.0015	U	NA		0.0013	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0015	U	NA		0.0013	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0015	U	NA		0.0013	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.059	U	NA		0.054	U
	Total VOCs	mg/kg	NS	4	10	NA		0.01862		NA		0.00046	
SVOCs													
	Acenaphthene	mg/kg	4	NS	NS	0.15	U	NA		0.14	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.18	U	NA		0.17	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.18	U	NA		0.17	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.18	U	NA		0.17	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.18	U	NA		0.17	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Azobenzene	mg/kg	50	NS	NS	0.18	U	NA		0.17	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	1.2		NA		0.4		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.2	U	NA		0.19	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.18	U	NA		0.17	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.16	U	NA		0.16	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.23		NA		0.17	U	NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.16	U	NA		0.16	U	NA	
	Bis(2-ethylhexyl)phthalate	mg/kg	90	NS	NS	0.18	U	NA		0.17	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.18	U	NA		0.17	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.18	U	NA		0.17	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.66		NA		0.2		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.66		NA		0.18		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	0.83		NA		0.23		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.25		NA		0.1	U	NA	
	Chrysene	mg/kg	70	NS	NS	0.66		NA		0.19		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.15	U	NA		0.14	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.21		NA		0.1	U	NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.42		NA		0.14	U	NA	
	Fluorene	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	0.74		NA		0.23		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.11		NA		0.073	U	NA	
	Indeno(1,2,3-cd)pyrene	mg/kg	7	NS	NS	0.42		NA		0.14	U	NA	
	Pyrene	mg/kg	1,000	NS	NS	1.1		NA		0.36		NA	
	Aniline	mg/kg	1,000	NS	NS	0.22	U	NA		0.21	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.18	U	NA		0.17	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.18	U	NA		0.17	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.1		NA		0.073	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(12)- DC				GLC-VMF(20)-RCS-1-FILL(9)- DC			
						GLC-VMF(20)- RCS-2-FILL(12)- DC-COMP		GLC-VMF(20)- RCS-2-FILL(12)- DC-VOC-5		GLC-VMF(20)- RCS-1-FILL(9)- DC-COMP		GLC-VMF(20)- RCS-1-FILL(9)- DC-VOC-6	
						L2101885-03		L2101885-04		L2103654-05		L2103654-06	
						1/13/2021		1/13/2021		1/22/2021		1/22/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	Acetophenone	mg/kg	1,000	NS	NS	0.18	U	NA		0.17	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.077	U	NA		0.073	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.4	U	NA		0.38	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.26	U	NA		0.24	U	NA	
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.88	U	NA		0.83	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.37	U	NA		0.35	U	NA	
	Phenol	mg/kg	1	NS	NS	0.18	U	NA		0.17	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.18	U	NA		0.17	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	0.26	U	NA		0.25	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.18	U	NA		0.17	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.2	U	NA		0.19	U	NA	
	Total SVOCs	mg/kg	NS	100	100	7.59		NA		1.79		NA	
PCBs													
	Aroclor 1016	mg/kg	1	NS	NS	0.18	U	NA		0.0338	U	NA	
	Aroclor 1221	mg/kg	1	NS	NS	0.18	U	NA		0.0338	U	NA	
	Aroclor 1232	mg/kg	1	NS	NS	0.18	U	NA		0.0338	U	NA	
	Aroclor 1242	mg/kg	1	NS	NS	0.18	U	NA		0.0338	U	NA	
	Aroclor 1248	mg/kg	1	NS	NS	0.18	U	NA		0.0338	U	NA	
	Aroclor 1254	mg/kg	1	NS	NS	0.928		NA		0.0338	U	NA	
	Aroclor 1260	mg/kg	1	NS	NS	0.18	U	NA		0.0338	U	NA	
	Aroclor 1262	mg/kg	1	NS	NS	0.18	U	NA		0.0338	U	NA	
	Aroclor 1268	mg/kg	1	NS	NS	0.18	U	NA		0.0338	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.928		NA		0.0338	U	NA	
Pesticides													
	Delta-BHC	mg/kg	10	NS	NS	0.00171	U	NA		0.0017	U	NA	
	Lindane	mg/kg	0.003	NS	NS	0.000569	U	NA		0.000568	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	0.000711	U	NA		0.00071	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	0.00171	U	NA		0.0017	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	0.000853	U	NA		0.000852	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	0.00171	U	NA		0.0017	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.0032	U	NA		0.0032	U	NA	
	Endrin	mg/kg	10	NS	NS	0.000711	U	NA		0.00071	U	NA	
	Endrin ketone	mg/kg	NS	NS	NS	0.00171	U	NA		0.0017	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	0.00107	U	NA		0.00106	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	0.00171	U	NA		0.0017	U	NA	
	4,4'-DDD	mg/kg	8	NS	NS	0.00539		NA		0.0017	U	NA	
	4,4'-DDT	mg/kg	6	NS	NS	0.0032	U	NA		0.0032	U	NA	
	Endosulfan I	mg/kg	0.5	NS	NS	0.00171	U	NA		0.0017	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	0.00171	U	NA		0.0017	U	NA	
	Endosulfan sulfate	mg/kg	NS	NS	NS	0.000711	U	NA		0.00071	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	0.0032	U	NA		0.0032	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	0.0142	U	NA		0.0142	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00171	U	NA		0.0017	U	NA	
Herbicides													
	MCP	mg/kg	NS	NS	NS	3.7	U	NA		3.5	U	NA	
	MCPA	mg/kg	100	NS	NS	3.7	U	NA		3.5	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	0.037	U	NA		0.035	U	NA	
	Dicamba	mg/kg	500	NS	NS	0.037	U	NA		0.035	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4-D	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4-DB	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.037	U	NA		0.035	U	NA	

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Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(20)-RCS-2-FILL(12)-DC				GLC-VMF(20)-RCS-1-FILL(9)-DC			
						GLC-VMF(20)-RCS-2-FILL(12)-DC-COMP		GLC-VMF(20)-RCS-2-FILL(12)-DC-VOC-5		GLC-VMF(20)-RCS-1-FILL(9)-DC-COMP		GLC-VMF(20)-RCS-1-FILL(9)-DC-VOC-6	
						L2101885-03		L2101885-04		L2103654-05		L2103654-06	
						1/13/2021		1/13/2021		1/22/2021		1/22/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
TPH													
	TPH (C10-C36)	mg/kg	1,000	2,500	5,000	133		NA		42.9		NA	
Metals, total													
	Antimony	mg/kg	20	NS	NS	2.11	U	NA		2.02	U	NA	
	Arsenic	mg/kg	20	40	40	7.66		NA		2.46		NA	
	Barium	mg/kg	1,000	NS	NS	41.8		NA		26.9		NA	
	Beryllium	mg/kg	90	NS	NS	0.241		NA		0.202	U	NA	
	Cadmium	mg/kg	70	30	80	0.722		NA		0.489		NA	
	Chromium	mg/kg	100	1,000	1,000	16.5		NA		18		NA	
	Lead	mg/kg	200	1,000	2,000	37.4		NA		11		NA	
	Mercury	mg/kg	20	10	10	0.149		NA		0.074	U	NA	
	Nickel	mg/kg	600	NS	NS	14.2		NA		11.7		NA	
	Selenium	mg/kg	400	NS	NS	2.11	U	NA		2.02	U	NA	
	Silver	mg/kg	100	NS	NS	0.422	U	NA		0.404	U	NA	
	Thallium	mg/kg	8	NS	NS	2.11	U	NA		2.02	U	NA	
	Vanadium	mg/kg	400	NS	NS	31.2		NA		40		NA	
	Zinc	mg/kg	1,000	NS	NS	67.7		NA		43.1		NA	
General Chemistry													
	Specific Conductance	umhos/cm	NS	4,000	8,000	52		NA		45		NA	
	pH	SU	NS	NS	NS	8.2		NA		8.4		NA	
	Cyanide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Sulfide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Ignitability		NS	NS	NS	NI		NA		NI		NA	

Notes:
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
su - Standard unit.
umhos/cm - Micro-mhos per centimeter.
I - The lower value for the two columns has been reported due to obvious interference.
ND - Not detected.
NI - Not ignitable.
NA - Sample not analyzed for the listed analyte.
NS - No MassDEP standards exist for this analyte.
P - The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.
U - Analyte was not detected at specified quantitation limit.
Values in **bold** indicate the analyte was detected.
VOCs - Volatile Organic Compounds.
SVOCs - Semivolatile Organic Compounds.
PCBs - Polychlorinated Biphenyls.
TPH - Total Petroleum Hydrocarbons.
RC - Reportable concentration.
(1) - MassDEP RC for C9-C10 aromatics used.
(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.
(3) - MassDEP RC for Dichloropropane used.
(4) - MassDEP RC for Dichloropropene used.
(5) - MassDEP RC for Chlorotoluene used.
* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(48)-RCS-2-FILL(24)- DC				GLC-VMF(9H)-RCS-2-FILL(5)- DC			
						GLC-VMF(48)- RCS-2-FILL(24)- DC-COMP		GLC-VMF(48)- RCS-2-FILL(24)- DC-VOC-3		GLC-VMF(9H)- RCS-2-FILL(5)- DC-COMP		GLC-VMF(9H)- RCS-2-FILL(5)- DC-VOC-5	
						L2104491-01		L2104491-02		L2105273-05		L2105273-06	
						1/27/2021		1/27/2021		2/3/2021		2/3/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
VOCs													
	Methylene chloride	mg/kg	0.1	NS	NS	NA		0.0031	U	NA		0.0043	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	NA		0.00061	U	NA		0.00086	U
	Chloroform	mg/kg	0.2	NS	NS	NA		0.00092	U	NA		0.0013	U
	Carbon tetrachloride	mg/kg	5	NS	NS	NA		0.00061	U	NA		0.00086	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	NA		0.00061	U	NA		0.00086	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	NA		0.00061	U	NA		0.00086	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	NA		0.00061	U	NA		0.00086	U
	Tetrachloroethene	mg/kg	1	NS	NS	NA		0.00035		NA		0.00071	
	Chlorobenzene	mg/kg	1	NS	NS	NA		0.00031	U	NA		0.00043	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	NA		0.0024	U	NA		0.0034	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	NA		0.00061	U	NA		0.00086	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	NA		0.00031	U	NA		0.00043	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	NA		0.00031	U	NA		0.00043	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00061	U	NA		0.00086	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	NA		0.00031	U	NA		0.00043	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	NA		0.00031	U	NA		0.00043	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	NA		0.00031	U	NA		0.00043	U
	Bromoform	mg/kg	0.1	NS	NS	NA		0.0024	U	NA		0.0034	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	NA		0.00031	U	NA		0.00043	U
	Benzene	mg/kg	2	NS	NS	NA		0.00031	U	NA		0.00043	U
	Toluene	mg/kg	30	NS	NS	NA		0.00061	U	NA		0.00086	U
	Ethylbenzene	mg/kg	40	NS	NS	NA		0.00061	U	NA		0.0067	
	Chloromethane	mg/kg	100	NS	NS	NA		0.0024	U	NA		0.0034	U
	Bromomethane	mg/kg	0.5	NS	NS	NA		0.0012	U	NA		0.0017	U
	Vinyl chloride	mg/kg	0.7	NS	NS	NA		0.00061	U	NA		0.00086	U
	Chloroethane	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,1-Dichloroethene	mg/kg	3	NS	NS	NA		0.00061	U	NA		0.00086	U
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	NA		0.00092	U	NA		0.0013	U
	Trichloroethene	mg/kg	0.3	NS	NS	NA		0.00031	U	NA		0.00043	U
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NA		0.0012	U	NA		0.0017	U
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	NA		0.0012	U	NA		0.0017	U
	p/m-Xylene	mg/kg	100(2)	NS	NS	NA		0.0012	U	NA		0.0017	U
	o-Xylene	mg/kg	100(2)	NS	NS	NA		0.00061	U	NA		0.00086	U
	Xylenes, Total	mg/kg	100	NS	NS	NA		0.00061	U	NA		0.00086	U
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	NA		0.00061	U	NA		0.00086	U
	1,2-Dichloroethene, Total	mg/kg	0.3	NS	NS	NA		0.00061	U	NA		0.00086	U
	Dibromomethane	mg/kg	500	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0017	U
	Styrene	mg/kg	3	NS	NS	NA		0.00061	U	NA		0.00086	U
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	NA		0.0061	U	NA		0.0086	U
	Acetone	mg/kg	6	NS	NS	NA		0.015	U	NA		0.021	U
	Carbon disulfide	mg/kg	100	NS	NS	NA		0.0061	U	NA		0.0086	U
	Methyl ethyl ketone	mg/kg	4	NS	NS	NA		0.0061	U	NA		0.0086	U
	Methyl isobutyl ketone	mg/kg	0.4	NS	NS	NA		0.0061	U	NA		0.0086	U
	2-Hexanone	mg/kg	100	NS	NS	NA		0.0061	U	NA		0.0086	U
	Bromochloromethane	mg/kg	NS	NS	NS	NA		0.0012	U	NA		0.0017	U
	Tetrahydrofuran	mg/kg	500	NS	NS	NA		0.0024	U	NA		0.0034	U
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	NA		0.00061	U	NA		0.00086	U
	1,3-Dichloropropane	mg/kg	500	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	NA		0.00031	U	NA		0.00043	U
	Bromobenzene	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0017	U
	n-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00061	U	NA		0.00086	U
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	NA		0.00061	U	NA		0.00086	U
	tert-Butylbenzene	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0017	U
	o-Chlorotoluene	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0017	U
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	NA		0.0012	U	NA		0.0017	U

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(48)-RCS-2-FILL(24)- DC				GLC-VMF(9H)-RCS-2-FILL(5)- DC			
						GLC-VMF(48)- RCS-2-FILL(24)- DC-COMP		GLC-VMF(48)- RCS-2-FILL(24)- DC-VOC-3		GLC-VMF(9H)- RCS-2-FILL(5)- DC-COMP		GLC-VMF(9H)- RCS-2-FILL(5)- DC-VOC-5	
						L2104491-01		L2104491-02		L2105273-05		L2105273-06	
						1/27/2021		1/27/2021		2/3/2021		2/3/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	NA		0.0018	U	NA		0.0026	U
	Hexachlorobutadiene	mg/kg	30	NS	NS	NA		0.0024	U	NA		0.0034	U
	Isopropylbenzene	mg/kg	1,000	NS	NS	NA		0.00061	U	NA		0.00086	U
	p-Isopropyltoluene	mg/kg	100	NS	NS	NA		0.00061	U	NA		0.00086	U
	Naphthalene	mg/kg	4	NS	NS	NA		0.0024	U	NA		0.0034	U
	n-Propylbenzene	mg/kg	100	NS	NS	NA		0.00061	U	NA		0.0016	
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	NA		0.0012	U	NA		0.0017	U
	Diethyl ether	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0017	U
	Diisopropyl Ether	mg/kg	100	NS	NS	NA		0.0012	U	NA		0.0017	U
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	NA		0.0012	U	NA		0.0017	U
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	NA		0.0012	U	NA		0.0017	U
	1,4-Dioxane	mg/kg	0.2	NS	NS	NA		0.049	U	NA		0.069	U
	Total VOCs	mg/kg	NS	4	10	NA		0.00035		NA		0.00901	
SVOCs													
	Acenaphthene	mg/kg	4	NS	NS	0.14	U	NA		0.14	U	NA	
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.17	U	NA		0.18	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	0.17	U	NA		0.18	U	NA	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.17	U	NA		0.18	U	NA	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.17	U	NA		0.18	U	NA	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	0.17	U	NA		0.18	U	NA	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	0.17	U	NA		0.18	U	NA	
	Azobenzene	mg/kg	50	NS	NS	0.17	U	NA		0.18	U	NA	
	Fluoranthene	mg/kg	1,000	NS	NS	0.86		NA		0.3		NA	
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	0.17	U	NA		0.18	U	NA	
	Bis(2-chloroisopropyl)ether	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	Bis(2-chloroethoxy)methane	mg/kg	500	NS	NS	0.18	U	NA		0.19	U	NA	
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.17	U	NA		0.18	U	NA	
	Hexachloroethane	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	Isophorone	mg/kg	100	NS	NS	0.15	U	NA		0.16	U	NA	
	Naphthalene	mg/kg	4	NS	NS	0.17	U	NA		0.18	U	NA	
	Nitrobenzene	mg/kg	500	NS	NS	0.15	U	NA		0.16	U	NA	
	Bis(2-ethylhexyl)phthalate	mg/kg	90	NS	NS	0.17	U	NA		0.18	U	NA	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	0.17	U	NA		0.18	U	NA	
	Di-n-butylphthalate	mg/kg	50	NS	NS	0.17	U	NA		0.18	U	NA	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	0.17	U	NA		0.18	U	NA	
	Diethyl phthalate	mg/kg	10	NS	NS	0.17	U	NA		0.18	U	NA	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	Benzo(a)anthracene	mg/kg	7	NS	NS	0.48		NA		0.19		NA	
	Benzo(a)pyrene	mg/kg	2	NS	NS	0.53		NA		0.21		NA	
	Benzo(b)fluoranthene	mg/kg	7	NS	NS	0.64		NA		0.24		NA	
	Benzo(k)fluoranthene	mg/kg	70	NS	NS	0.22		NA		0.11	U	NA	
	Chrysene	mg/kg	70	NS	NS	0.49		NA		0.18		NA	
	Acenaphthylene	mg/kg	1	NS	NS	0.14	U	NA		0.14	U	NA	
	Anthracene	mg/kg	1,000	NS	NS	0.13		NA		0.11	U	NA	
	Benzo(ghi)perylene	mg/kg	1,000	NS	NS	0.29		NA		0.14	U	NA	
	Fluorene	mg/kg	1,000	NS	NS	0.17	U	NA		0.18	U	NA	
	Phenanthrene	mg/kg	10	NS	NS	0.38		NA		0.18		NA	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	Indeno(1,2,3-cd)pyrene	mg/kg	7	NS	NS	0.28		NA		0.14	U	NA	
	Pyrene	mg/kg	1,000	NS	NS	0.8		NA		0.27		NA	
	Aniline	mg/kg	1,000	NS	NS	0.2	U	NA		0.21	U	NA	
	4-Chloroaniline	mg/kg	1	NS	NS	0.17	U	NA		0.18	U	NA	
	Dibenzofuran	mg/kg	100	NS	NS	0.17	U	NA		0.18	U	NA	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(48)-RCS-2-FILL(24)- DC				GLC-VMF(9H)-RCS-2-FILL(5)- DC			
						GLC-VMF(48)- RCS-2-FILL(24)- DC-COMP		GLC-VMF(48)- RCS-2-FILL(24)- DC-VOC-3		GLC-VMF(9H)- RCS-2-FILL(5)- DC-COMP		GLC-VMF(9H)- RCS-2-FILL(5)- DC-VOC-5	
						L2104491-01		L2104491-02		L2105273-05		L2105273-06	
1/27/2021		1/27/2021		2/3/2021		2/3/2021							
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
	Acetophenone	mg/kg	1,000	NS	NS	0.17	U	NA		0.18	U	NA	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	2-Chlorophenol	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	2,4-Dichlorophenol	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	0.072	U	NA		0.075	U	NA	
	2-Nitrophenol	mg/kg	100	NS	NS	0.37	U	NA		0.39	U	NA	
	4-Nitrophenol	mg/kg	100	NS	NS	0.24	U	NA		0.25	U	NA	
	2,4-Dinitrophenol	mg/kg	3	NS	NS	0.82	U	NA		0.86	U	NA	
	Pentachlorophenol	mg/kg	3	NS	NS	0.34	U	NA		0.36	U	NA	
	Phenol	mg/kg	1	NS	NS	0.17	U	NA		0.18	U	NA	
	2-Methylphenol	mg/kg	500	NS	NS	0.17	U	NA		0.18	U	NA	
	3-Methylphenol/4-Methylphenol	mg/kg	500	NS	NS	0.25	U	NA		0.26	U	NA	
	2,4,5-Trichlorophenol	mg/kg	4	NS	NS	0.17	U	NA		0.18	U	NA	
	Pyridine	mg/kg	500	NS	NS	0.18	U	NA		0.19	U	NA	
	Total SVOCs	mg/kg	NS	100	100	5.1		NA		1.57		NA	
PCBs													
	Aroclor 1016	mg/kg	1	NS	NS	0.0343	U	NA		0.0361	U	NA	
	Aroclor 1221	mg/kg	1	NS	NS	0.0343	U	NA		0.0361	U	NA	
	Aroclor 1232	mg/kg	1	NS	NS	0.0343	U	NA		0.0361	U	NA	
	Aroclor 1242	mg/kg	1	NS	NS	0.0343	U	NA		0.0361	U	NA	
	Aroclor 1248	mg/kg	1	NS	NS	0.0343	U	NA		0.0361	U	NA	
	Aroclor 1254	mg/kg	1	NS	NS	0.095		NA		0.0406		NA	
	Aroclor 1260	mg/kg	1	NS	NS	0.0343	U	NA		0.0361	U	NA	
	Aroclor 1262	mg/kg	1	NS	NS	0.0343	U	NA		0.0361	U	NA	
	Aroclor 1268	mg/kg	1	NS	NS	0.0343	U	NA		0.0361	U	NA	
	PCBs, Total	mg/kg	1	2	2	0.095		NA		0.0406		NA	
Pesticides													
	Delta-BHC	mg/kg	10	NS	NS	0.00168	U	NA		0.00171	U	NA	
	Lindane	mg/kg	0.003	NS	NS	0.000559	U	NA		0.00057	U	NA	
	Alpha-BHC	mg/kg	50	NS	NS	0.000699	U	NA		0.000712	U	NA	
	Beta-BHC	mg/kg	10	NS	NS	0.00168	U	NA		0.00171	U	NA	
	Heptachlor	mg/kg	0.3	NS	NS	0.000839	U	NA		0.000854	U	NA	
	Aldrin	mg/kg	0.08	NS	NS	0.00168	U	NA		0.00171	U	NA	
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.00315	U	NA		0.0032	U	NA	
	Endrin	mg/kg	10	NS	NS	0.000699	U	NA		0.000712	U	NA	
	Endrin ketone	mg/kg	NS	NS	NS	0.00168	U	NA		0.00171	U	NA	
	Dieldrin	mg/kg	0.08	NS	NS	0.00105	U	NA		0.00107	U	NA	
	4,4'-DDE	mg/kg	6	NS	NS	0.00168	U	NA		0.00171	U	NA	
	4,4'-DDD	mg/kg	8	NS	NS	0.00168	U	NA		0.00171	U	NA	
	4,4'-DDT	mg/kg	6	NS	NS	0.00315	U	NA		0.00544		NA	
	Endosulfan I	mg/kg	0.5	NS	NS	0.00168	U	NA		0.00171	U	NA	
	Endosulfan II	mg/kg	0.5	NS	NS	0.00168	U	NA		0.00171	U	NA	
	Endosulfan sulfate	mg/kg	NS	NS	NS	0.000699	U	NA		0.000712	U	NA	
	Methoxychlor	mg/kg	200	NS	NS	0.00315	U	NA		0.0032	U	NA	
	Chlordane	mg/kg	0.7	NS	NS	0.014	U	NA		0.0142	U	NA	
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00168	U	NA		0.00171	U	NA	
Herbicides													
	MCPP	mg/kg	NS	NS	NS	3.5	U	NA		3.6	U	NA	
	MCPA	mg/kg	100	NS	NS	3.5	U	NA		3.6	U	NA	
	Dalapon	mg/kg	1,000	NS	NS	0.035	U	NA		0.036	U	NA	
	Dicamba	mg/kg	500	NS	NS	0.035	U	NA		0.036	U	NA	
	Dichloroprop	mg/kg	NS	NS	NS	0.035	U	NA		0.036	U	NA	
	2,4-D	mg/kg	100	NS	NS	0.035	U	NA		0.036	U	NA	
	2,4-DB	mg/kg	100	NS	NS	0.035	U	NA		0.036	U	NA	
	2,4,5-T	mg/kg	100	NS	NS	0.035	U	NA		0.036	U	NA	
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.035	U	NA		0.036	U	NA	

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location: Sample Name: Lab Sample ID: Sample Date:						GLC-VMF(48)-RCS-2-FILL(24)-DC				GLC-VMF(9H)-RCS-2-FILL(5)-DC			
						GLC-VMF(48)-RCS-2-FILL(24)-DC-COMP		GLC-VMF(48)-RCS-2-FILL(24)-DC-VOC-3		GLC-VMF(9H)-RCS-2-FILL(5)-DC-COMP		GLC-VMF(9H)-RCS-2-FILL(5)-DC-VOC-5	
						L2104491-01		L2104491-02		L2105273-05		L2105273-06	
						1/27/2021		1/27/2021		2/3/2021		2/3/2021	
Analysis	Analyte	Units	RCS-1	MA Unlined Landfill*	MA Lined Landfill*								
TPH													
	TPH (C10-C36)	mg/kg	1,000	2,500	5,000	79		NA		76.8		NA	
Metals, total													
	Antimony	mg/kg	20	NS	NS	2.06	U	NA		2.11	U	NA	
	Arsenic	mg/kg	20	40	40	4.49		NA		4.24		NA	
	Barium	mg/kg	1,000	NS	NS	32.2		NA		27.1		NA	
	Beryllium	mg/kg	90	NS	NS	0.206	U	NA		0.211	U	NA	
	Cadmium	mg/kg	70	30	80	0.526		NA		0.561		NA	
	Chromium	mg/kg	100	1,000	1,000	19.2		NA		14.4		NA	
	Lead	mg/kg	200	1,000	2,000	22.6		NA		19.7		NA	
	Mercury	mg/kg	20	10	10	0.077	U	NA		0.075	U	NA	
	Nickel	mg/kg	600	NS	NS	12.2		NA		11.9		NA	
	Selenium	mg/kg	400	NS	NS	2.06	U	NA		2.11	U	NA	
	Silver	mg/kg	100	NS	NS	0.411	U	NA		0.422	U	NA	
	Thallium	mg/kg	8	NS	NS	2.06	U	NA		2.11	U	NA	
	Vanadium	mg/kg	400	NS	NS	26.8		NA		30.1		NA	
	Zinc	mg/kg	1,000	NS	NS	39.8		NA		43.3		NA	
General Chemistry													
	Specific Conductance	umhos/cm	NS	4,000	8,000	40		NA		100		NA	
	pH	SU	NS	NS	NS	8.1		NA		8.1		NA	
	Cyanide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Sulfide, Reactive	mg/kg	NS	NS	NS	10	U	NA		10	U	NA	
	Ignitability		NS	NS	NS	NI		NA		NI		NA	

Notes:
mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).
su - Standard unit.
umhos/cm - Micro-mhos per centimeter.
I - The lower value for the two columns has been reported due to obvious interference.
ND - Not detected.
NI - Not ignitable.
NA - Sample not analyzed for the listed analyte.
NS - No MassDEP standards exist for this analyte.
P - The relative percent difference (RPD) between the results for the two columns exceeds the method-specified criteria.
U - Analyte was not detected at specified quantitation limit.
Values in **bold** indicate the analyte was detected.
VOCs - Volatile Organic Compounds.
SVOCs - Semivolatile Organic Compounds.
PCBs - Polychlorinated Biphenyls.
TPH - Total Petroleum Hydrocarbons.
RC - Reportable concentration.
(1) - MassDEP RC for C9-C10 aromatics used.
(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.
(3) - MassDEP RC for Dichloropropane used.
(4) - MassDEP RC for Dichloropropene used.
(5) - MassDEP RC for Chlorotoluene used.
* - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location:						GLC-VMF(48)- RCS-2-FILL(48)		GLC-WASHPS			GLC- OSCDRILLSPOILS		GLC-VMF(20)- RCS-1-FILL(16)		GLC-1001B-(0-3)		GLC-NP-314-15				
						GLC-VMF(48)- RCS-2-FILL(48)- DC-COMP/GLC- VMF(48)-RCS-2- FILL(48)-DC-VOC- 7		GLC-WASHPS- 40821-DC-COMP (0-2)/GLC- WASHPS-40821- DC-VOC (1-2)		GLC-WASHPS- 041221-DC- COMP/GLC- WASHPS-041221- DC-VOC-6		OSCDRILLSPOIL S-210329-DC- COMP/GLC- OSCDRILLSPOIL S-210329-DC-VOC 8		GLC-VMF(20)- RCS-1-FILL(16)- DC-COMP/GLC- VMF(20)-RCS-1- FILL(16)-DC-VOC 2		GLC-1001B-(0-3)- 041521-DC- COMP/GLC-1001B- (0-3)-041521-DC- VOC-3		GLC-NP-314-15- DC-COMP/GLC- NP-314-15-DC- VOC(4)			
						Sample Name*:		Sample Depth*:													
						Sample Date:		N/A/7 ft 4/6/2021		0-2/1-2 ft 4/8/2021		N/A/6 ft 4/23/2021		N/A/8 ft 4/23/2021		N/A/2 ft 4/28/2021		N/A/3 ft 4/28/2021		N/A/4 ft 6/10/2021	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*																
VOCs	Methylene chloride	mg/kg	0.1	NS	NS	0.0026	U	0.0038	U	0.0042	U	0.0038	U	0.0028	U	0.0036	U	0.0026	U		
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	Chloroform	mg/kg	0.2	NS	NS	0.00077	U	0.0012	U	0.0012	U	0.0011	U	0.00085	U	0.0011	U	0.00078	U		
	Carbon tetrachloride	mg/kg	5	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	Dibromochloromethane	mg/kg	0.005	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	Tetrachloroethene	mg/kg	1	NS	NS	0.00034	U	0.0024	U	0.0010	U	0.00056	U	0.00040	U	0.00036	U	0.00041	U		
	Chlorobenzene	mg/kg	1	NS	NS	0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U		
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	0.0020	U	0.0031	U	0.0033	U	0.0030	U	0.0023	U	0.0029	U	0.0021	U		
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U		
	Bromodichloromethane	mg/kg	0.1	NS	NS	0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U		
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U		
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U		
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U		
	Bromoform	mg/kg	0.1	NS	NS	0.0020	U	0.0031	U	0.0033	U	0.0030	U	0.0023	U	0.0029	U	0.0021	U		
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U		
	Benzene	mg/kg	2	NS	NS	0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00035	U	0.00026	U		
	Toluene	mg/kg	30	NS	NS	0.00051	U	0.00079	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	Ethylbenzene	mg/kg	40	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	Chloromethane	mg/kg	100	NS	NS	0.0020	U	0.0031	U	0.0033	U	0.0030	U	0.0023	U	0.0029	U	0.0021	U		
	Bromomethane	mg/kg	0.5	NS	NS	0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U		
	Vinyl chloride	mg/kg	0.7	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	Chloroethane	mg/kg	100	NS	NS	0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U		
	1,1-Dichloroethene	mg/kg	3	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	0.00077	U	0.0012	U	0.0012	U	0.0011	U	0.00085	U	0.0011	U	0.00078	U		
	Trichloroethene	mg/kg	0.3	NS	NS	0.00026	U	0.00038	U	0.00042	U	0.00038	U	0.00028	U	0.00036	U	0.00026	U		
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U		
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U		
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U		
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U		
	p/m-Xylene	mg/kg	100(2)	NS	NS	0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U		
	o-Xylene	mg/kg	100(2)	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	Xylenes (Total)	mg/kg	100	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	1,2-Dichloroethene (total)	mg/kg	0.3	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	Dibromomethane	mg/kg	500	NS	NS	0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U		
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	0.0010	U	0.0015	U	0.0017	U	0.0015	U	0.0011	U	0.0014	U	0.0010	U		
	Styrene	mg/kg	3	NS	NS	0.00051	U	0.00077	U	0.00083	U	0.00076	U	0.00057	U	0.00072	U	0.00052	U		
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	0.0051	U	0.0077	U	0.0083	U	0.0076	U	0.0057	U	0.0072	U	0.0052	U		
	Acetone	mg/kg	6	NS	NS	0.013	U	0.019	U	0.036	U	0.02	U	0.014	U	0.018	U	0.015	U		
	Carbon disulfide	mg/kg	100	NS	NS	0.0051	U	0.0077	U	0.0083	U	0.0076	U	0.0057	U	0.0072	U	0.0052	U		
	2-Butanone	mg/kg	4	NS	NS	0.0051	U	0.0077	U	0.0083	U	0.0076	U	0.0057	U	0.0072	U	0.0052	U		
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS	0.0051	U	0.0077	U	0.0083	U	0.0076	U	0.0057	U	0.0072	U	0.0052	U</		

Table 2 - Soil Characterization Analytical Results
Washington Street - RTN 3-34742
Somerville, Massachusetts

Sample Location:						GLC-VMF(48)- RCS-2-FILL(48)		GLC-WASHPS				GLC- OSCDRILLSPOILS		GLC-VMF(20)- RCS-1-FILL(16)		GLC-100IB-(0-3)		GLC-NP-314-15			
						GLC-VMF(48)- RCS-2-FILL(48)- DC-COMP/GLC- VMF(48)-RCS-2- FILL(48)-DC-VOC- 7		GLC-WASHPS- 40821-DC-COMP (0-2)/GLC- WASHPS-40821- DC-VOC (1-2)		GLC-WASHPS- 041221-DC- COMP/GLC- WASHPS-041221- DC-VOC-6		OSCDRILLSPOIL S-210329-DC- COMP/GLC- OSCDRILLSPOIL S-210329-DC-VOC 8		GLC-VMF(20)- RCS-1-FILL(16)- DC-COMP/GLC- VMF(20)-RCS-1- FILL(16)-DC-VOC 2		GLC-100IB-(0-3)- 041521-DC- COMP/GLC-100IB- (0-3)-041521-DC- VOC-3		GLC-NP-314-15- DC-COMP/GLC- NP-314-15-DC- VOC(4)			
						Sample Name*:		N/A/7 ft		0-2/1-2 ft		N/A/6 ft		N/A/8 ft		N/A/2 ft		N/A/3 ft		N/A/4 ft	
						Sample Depth*:		4/6/2021		4/8/2021		4/23/2021		4/23/2021		4/28/2021		4/28/2021		6/10/2021	
Sample Date:																					
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*																
PCBs																					
	Aroclor-1016	mg/kg	1	NS	NS	0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U		
	Aroclor-1221	mg/kg	1	NS	NS	0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U		
	Aroclor-1232	mg/kg	1	NS	NS	0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U		
	Aroclor-1242	mg/kg	1	NS	NS	0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U		
	Aroclor-1248	mg/kg	1	NS	NS	0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U		
	Aroclor-1254	mg/kg	1	NS	NS	0.0606		0.0368	U	0.0387	U	0.0346	U	0.0794		0.0451		0.0362	U		
	Aroclor-1260	mg/kg	1	NS	NS	0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U		
	Aroclor-1262	mg/kg	1	NS	NS	0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U		
	Aroclor-1268	mg/kg	1	NS	NS	0.0391	U	0.0368	U	0.0387	U	0.0346	U	0.0357	U	0.0349	U	0.0362	U		
	Total PCBs	mg/kg	1	2	2	0.0606		0.0368	U	0.0387	U	0.0346	U	0.0794		0.0451		0.0362	U		
Pesticides																					
	Delta-BHC	mg/kg	10	NS	NS	0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U		
	Lindane	mg/kg	0.003	NS	NS	0.000609	U	0.000614	U	0.000590	U	0.000566	U	0.000560	U	0.000564	U	0.000575	U		
	Alpha-BHC	mg/kg	50	NS	NS	0.000761	U	0.000767	U	0.000738	U	0.000707	U	0.000701	U	0.000704	U	0.000719	U		
	Beta-BHC	mg/kg	10	NS	NS	0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U		
	Heptachlor	mg/kg	0.3	NS	NS	0.000913	U	0.000920	U	0.000886	U	0.000848	U	0.000841	U	0.000845	U	0.000862	U		
	Aldrin	mg/kg	0.08	NS	NS	0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U		
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.00342	U	0.00345	U	0.00332	U	0.00318	U	0.00315	U	0.00317	U	0.00323	U		
	Endrin	mg/kg	10	NS	NS	0.000761	U	0.000767	U	0.000738	U	0.000707	U	0.000701	U	0.000704	U	0.000719	U		
	Endrin ketone	mg/kg	NS	NS	NS	0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U		
	Dieldrin	mg/kg	0.08	NS	NS	0.00114	U	0.00115	U	0.00111	U	0.00106	U	0.00105	U	0.00106	U	0.00108	U		
	4,4'-DDE	mg/kg	6	NS	NS	0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00348		0.00210	P	0.00172	U		
	4,4'-DDD	mg/kg	8	NS	NS	0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00518		0.00316		0.00236			
	4,4'-DDT	mg/kg	6	NS	NS	0.00342	U	0.00345	U	0.00332	U	0.00318	U	0.0103	P	0.00317	U	0.0102	P		
	Endosulfan I	mg/kg	0.5	NS	NS	0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U		
	Endosulfan II	mg/kg	0.5	NS	NS	0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U		
	Endosulfan sulfate	mg/kg	0.5	NS	NS	0.000761	U	0.000767	U	0.000738	U	0.000707	U	0.000701	U	0.000704	U	0.000719	U		
	Methoxychlor	mg/kg	200	NS	NS	0.00342	U	0.00345	U	0.00332	U	0.00318	U	0.00315	U	0.00317	U	0.00323	U		
	Chlordane	mg/kg	0.7	NS	NS	0.0152	U	0.0153	U	0.0148	U	0.0141	U	0.0140	U	0.0141	U	0.0144	U		
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.00183	U	0.00184	U	0.00177	U	0.00170	U	0.00168	U	0.00169	U	0.00172	U		
Herbicides																					
	MCPP	mg/kg	NS	NS	NS	3.9	U	3.8	U	3.9	U	3.5	U	3.6	U	3.5	U	3.6	U		
	MCPA	mg/kg	100	NS	NS	3.9	U	3.8	U	3.9	U	3.5	U	3.6	U	3.5	U	3.6	U		
	Dalapon	mg/kg	1,000	NS	NS	0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U		
	Dicamba	mg/kg	500	NS	NS	0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U		
	Dichloroprop	mg/kg	NS	NS	NS	0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U		
	2,4-D	mg/kg	100	NS	NS	0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U		
	2,4-DB	mg/kg	100	NS	NS	0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U		
	2,4,5-T	mg/kg	100	NS	NS	0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U		
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.039	U	0.038	U	0.039	U	0.035	U	0.036	U	0.035	U	0.036	U		
TPH																					
	Total Petroleum Hydrocarbons C10-C36	mg/kg	1,000	2,500	5,000	39.3	U	75.4		65.7		64.1		48.8		107		682			
Metals, total																					
	Antimony	mg/kg	20	NS	NS	2.33	U	2.19	U	2.26	U	2.09	U	2.10	U	2.06	U	2.13	U		
	Arsenic	mg/kg	20	40	40	5.50		2.58		7.48		6.68		2.24		1.64		7.25			
	Barium	mg/kg	1,000	NS	NS	51.0		35.8		41.5		35.1		46.4		51.7					
	Beryllium	mg/kg	90	NS	NS	0.270		0.373		0.226	U	0.209	U	0.315		0.362		0.392			
	Cadmium	mg/kg	70	30	80	0.536		0.439	U	0.488		0.418		0.420	U	0.486		0.537			
	Chromium	mg/kg	100	1,000	1,000	22.0		9.72		19.3		19.4		20.5		24.3		16.1			
	Lead	mg/kg	200	1,000	2,000	18.8		27.6		78.8		87.7		20.7		25.8		133			
	Mercury	mg/kg	20	10	10	0.086	U	0.078	U	0.252		0.090		0.134		0.199		0.242			
	Nickel	mg/kg	600	NS	NS	17.7		7.44		14.0		11.3		15.8		15.4		11.9			
	Selenium	mg/kg	400	NS	NS	2.33	U	2.19	U	2.26	U	2.09	U	2.10	U	2.06	U	2.13	U		
	Silver	mg/kg	100	NS	NS	0.466	U	0.439	U	0.451	U	0.418	U	0.420	U	0.412	U	0.426	U		
	Thallium	mg/kg	8	NS	NS	2.33	U	2.19	U	2.26	U	2.09	U	2.10	U	2.06	U	2.13	U		
	Vanadium	mg/kg	400	NS	NS	49.2		12.0		24.8		25.8		43.9		45.8		25.0			
	Zinc	mg/kg	1,000	NS	NS	43.6		21.1		75.7		48.7		56.8		71.0		123			
Metals, TCLP																					
	Lead	mg/L	5**	NS	NS	NA		NA		NA		NA		NA		NA		0.500	U		
General Chemistry																					
	Ignitability		NS	NS	NS	NI		NI		NI		NI		NI		NI		NI			
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U	10	U	10	U	10	U	10	U	10	U	10	U		
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U	10	U	10	U	10	U	10	U	10	U	10	U		
	pH	su	NS	>2 <12.5	>2 <12.5	8.5		8.3		8.6		8.2		8.1		8.3		8.4			
	Specific conductance	umhos/cm	NS	4,000	8,000	86		69		53		82		53		68		110			

TABLE 1
SOIL SAMPLING SUMMARY

<u>Collection Date</u>	<u>Collection Method</u>	<u>Disposal Sample ID(s)</u>	<u>Receiving Facility or Anticipated Receiving Facility</u>	<u>Disposal Package (Approval Number)</u>
10/7/2021	Stockpile	GLC-NP-306A-18-C-DC-COMP GLC-NP-306A-18-C-DC-VOC-7	Niagara	Niagara No. 6
10/22/2021	Stockpile	GLC-WSPTOPCLEAN-DC-COMP GLC-WSPTOPCLEAN-DC-VOC-7	Lynn	Lynn No. 2 Amendment #4
11/9/2021	Stockpile	GLC-WASHPSSED102221-DC-COMP GLC-WASHPSSED102221-DC-VOC-3	Lynn	Lynn No. 2 Amendment #5
11/11/2021	Stockpile	GLC-NP-318B-02-DC-COMP GLC-NP-318B-02-DC-VOC-4	Heritage	Heritage No. 2 Amendment #4
12/20/2021	Stockpile	GLC-WASHPS20211213-DC-COMP GLC-WASHPS20211213-DC-VOC-06	Lynn	Lynn No. 2 Amendment #6
1/12/2022	Stockpile	GLC-WASHPUMP20210805RU-COMP GLC-WASHPUMP20210805RU-VOC(5)	Lynn	Lynn No. 2 Amendment #7

Receiving Facilities: Lynn Landfill Company, LLC. - Marine Boulevard to 25 Riley Way Extension, Lynn, MA 01905
Allied Niagara Falls Landfill – 5600 Niagara Fall Boulevard, Niagara Falls, NY 14304
Heritage Environmental Services – 4370 W. County Road 1275 N., Roachdale, IN 46172

Table 2 -- Soil Characterization Analytical Results -- October, November, and December 2021 and January 2022
Washington Street
MBTA Green Line Extension Project

Sample Location:		GLC-NP-306A-18-C-DC	GLC-WASHPSSED-GLC-	GLC-WSPTOPCLEA-GLC-	NP-318B-02-DC	WASHPS20211-213-DC	WASHPUM202100SRU/GLC
Sample Name:		GLC-NP-306A-18-C-DC COMP/CLC-NP-306A-18-C-DC-VOC7	GLC-WASHPSSED10-2221-DC COMP/CLC-NP-306A-18-C-DC-VOC7	GLC-WSPTOPCLEA-N-DC COMP/CLC-WSPTOPCLEA-N-DC-VOC7	GLC-NP-318B-02-DC COMP/CLC-NP-318B-02-DC-VOC4	GLC-WASHPS20211-213-DC COMP/CLC-WASHPS2021-213-DC-VOC6	GLC-WASHPUM2021080SRU-COMP/CLC-WASHPUM2021080SRU-VOC(5)
Lab Sample ID#:		L2154830-0506L2155291-02	L2161496-0102	L2158092-0102	L216171-0102	L2170050-0102	L2102603-0102
Sample Depth: Sample Date:		02 10/7/2021	N/A/7 11/9/2021	N/A/7 10/22/2021	N/A/4 11/1/2021	N/A/6 12/20/2021	N/A/5 1/12/2022
Analysis VOCS	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill†		
	Methylene chloride	mg/kg	0.1	NS	NS	0.27	U
	1,1-Dichloroethane	mg/kg	0.4	NS	NS	0.084	U
	Chloroform	mg/kg	0.2	NS	NS	0.051	U
	Carbon tetrachloride	mg/kg	5	NS	NS	0.054	U
	1,2-Dichloropropane	mg/kg	0.1	NS	NS	0.054	U
	Dibromochloromethane	mg/kg	0.005	NS	NS	0.054	U
	1,1,2-Trichloroethane	mg/kg	0.1	NS	NS	0.054	U
	Tetrachloroethene	mg/kg	1	NS	NS	0.05	0.023
	Chlorobenzene	mg/kg	1	NS	NS	0.027	U
	Trichlorofluoromethane	mg/kg	1,000	NS	NS	0.022	U
	1,2-Dichloroethane	mg/kg	0.1	NS	NS	0.054	U
	1,1,1-Trichloroethane	mg/kg	30	NS	NS	0.027	U
	Bromodichloromethane	mg/kg	0.1	NS	NS	0.027	U
	trans-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.054	U
	cis-1,3-Dichloropropene	mg/kg	0.01	NS	NS	0.027	U
	1,3-Dichloropropene, Total	mg/kg	0.01	NS	NS	0.027	U
	1,1-Dichloropropene	mg/kg	0.01(4)	NS	NS	0.027	U
	Bromoforn	mg/kg	0.1	NS	NS	0.022	U
	1,1,2,2-Tetrachloroethane	mg/kg	0.005	NS	NS	0.027	U
	Benzene	mg/kg	2	NS	NS	0.18	0.0070
	Toluene	mg/kg	30	NS	NS	0.32	0.0014
	Ethylbenzene	mg/kg	40	NS	NS	0.41	0.0014
	Chloromethane	mg/kg	100	NS	NS	0.22	0.0056
	Bromomethane	mg/kg	0.5	NS	NS	0.11	0.0028
	Vinyl chloride	mg/kg	0.7	NS	NS	0.054	0.0014
	Chloroethane	mg/kg	100	NS	NS	0.11	0.0028
	1,1-Dichloroethene	mg/kg	3	NS	NS	0.054	0.0014
	trans-1,2-Dichloroethene	mg/kg	1	NS	NS	0.081	0.0021
	Trichloroethene	mg/kg	0.3	NS	NS	0.027	0.0034
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	0.11	0.0028
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	0.11	0.0028
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	0.11	0.0028
	Methyl tert butyl ether	mg/kg	0.1	NS	NS	0.11	0.0028
	p-m-Xylene	mg/kg	100(2)	NS	NS	0.49	0.0028
	o-Xylene	mg/kg	100(2)	NS	NS	0.19	0.0014
	Xylenes (Total)	mg/kg	100	NS	NS	0.68	0.0014
	cis-1,2-Dichloroethene	mg/kg	0.1	NS	NS	0.054	0.0026
	1,2-Dichloroethane (total)	mg/kg	0.3	NS	NS	0.054	0.0026
	Dibromomethane	mg/kg	500	NS	NS	0.11	0.0028
	1,2,3-Trichloropropane	mg/kg	100	NS	NS	0.11	0.0028
	Styrene	mg/kg	3	NS	NS	0.12	0.0014
	Dichlorodifluoromethane	mg/kg	1,000	NS	NS	0.54	0.0014
	Acetone	mg/kg	6	NS	NS	0.54	0.0035
	Carbon disulfide	mg/kg	100	NS	NS	0.54	0.0014
	2-Butanone	mg/kg	4	NS	NS	0.54	0.0014
	4-Methyl-2-pentanone	mg/kg	0.4	NS	NS	0.54	0.0014
	2-Hexanone	mg/kg	100	NS	NS	0.54	0.0014
	Bromochloromethane	mg/kg	NS	NS	NS	0.11	0.0028
	Tetrahydrofuran	mg/kg	500	NS	NS	0.22	0.0056
	2,2-Dichloropropane	mg/kg	0.1(3)	NS	NS	0.11	0.0028
	1,2-Dibromoethane	mg/kg	0.1	NS	NS	0.054	0.0014
	1,3-Dichloropropane	mg/kg	500	NS	NS	0.11	0.0028
	1,1,1,2-Tetrachloroethane	mg/kg	0.1	NS	NS	0.027	0.00070
	Bromobenzene	mg/kg	100	NS	NS	0.11	0.0028
	n-Butylbenzene	mg/kg	100(1)	NS	NS	0.054	0.0014
	sec-Butylbenzene	mg/kg	100(1)	NS	NS	0.054	0.0014
	tert-Butylbenzene	mg/kg	100	NS	NS	0.11	0.0028
	o-Chlorotoluene	mg/kg	100	NS	NS	0.11	0.0028
	p-Chlorotoluene	mg/kg	100(5)	NS	NS	0.11	0.0028
	1,2-Dibromo-3-chloropropane	mg/kg	10	NS	NS	0.16	0.0042
	Hexachlorobutadiene	mg/kg	30	NS	NS	0.22	0.0056
	Isopropylbenzene	mg/kg	1,000	NS	NS	0.609	0.0014
	p-Isopropyltoluene	mg/kg	100	NS	NS	0.16	0.0071
	Naphthalene	mg/kg	NS	NS	NS	5.4	0.014
	n-Propylbenzene	mg/kg	100	NS	NS	0.057	0.0014
	1,2,3-Trichlorobenzene	mg/kg	NS	NS	NS	0.11	0.0028
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.11	0.0028
	1,3,5-Trimethylbenzene	mg/kg	10	NS	NS	0.36	0.0028
	1,2,4-Trimethylbenzene	mg/kg	1,000	NS	NS	0.4	0.0028
	Ethyl ether	mg/kg	100	NS	NS	0.11	0.0028
	Isopropyl Ether	mg/kg	100	NS	NS	0.11	0.0028
	Ethyl-Tert-Butyl-Ether	mg/kg	NS	NS	NS	0.098	0.0019
	Tertiary-Amyl Methyl Ether	mg/kg	NS	NS	NS	0.11	0.0028
	1,4-Dioxane	mg/kg	0.2	NS	NS	4.3	0.11
Total VOCs		mg/kg	NS	4	10	8.21	0.043
							0.018
							3.59
							0.016
							0.004

Washington Street
MBTA Green Line Extension Project

Sample Location:						GLC-NP-306A-18-C-DC	GLC-WASHSPED-	GLC-WSTOPCLEA	NP-318B-02-DC	WASHSP20211-213-DC	WASHPUMP20-21080SRU-GLC								
Sample Name:						GLC-NP-306A-18-C-DC-COMP/GLC-NP-306A-18-C-DC-VOC-7	GLC-WASHSPED10-2221-DC-COMP/GLC-WASHSPED10-2221-DC-VOC-3	GLC-WSTOPCLEA-N-DC-COMP/GLC-WSTOPCLEA-N-DC-COMP/GLC-NP-318B-02-DC-VOC-4	GLC-NP-318B-02-DC-COMP/GLC-NP-318B-02-DC-VOC-4	GLC-WASHSP20211-213-DC-COMP/GLC-WASHSP20211-213-DC-VOC-6	GLC-WASHPUMP20-21080SRU-COMP/GLC-WASHPUMP20-21080SRU-VOC (5)								
Lab Sample ID**						L2154830-05/06/L2155291-02	L2161496-01/02	L2158092-01/02	L2162117-01/02	L2170050-01/02	L2201603-01/02								
Sample Depth:						N/A 7 ft	N/A 3 ft	N/A 7 ft	N/A 4 ft	N/A 6 ft	N/A 5 ft								
Sample Date:						10/7/2021	11/9/2021	10/22/2021	11/1/2021	12/20/2021	1/12/2022								
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*														
SVOCs	Aceanaphthene	mg/kg	4	NS	NS	6.2	0.28	U	0.15	U	0.15	U	0.22	0.53	U				
	1,2,4-Trichlorobenzene	mg/kg	2	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U		
	Hexachlorobenzene	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	Bis(2-chloroethyl)ether	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	2-Chloronaphthalene	mg/kg	1,000	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	1,2-Dichlorobenzene	mg/kg	9	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	1,3-Dichlorobenzene	mg/kg	3	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	1,4-Dichlorobenzene	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	3,3'-Dichlorobenzidine	mg/kg	3	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	2,4-Dinitrotoluene	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	2,6-Dinitrotoluene	mg/kg	100	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Azobenzene	mg/kg	NS	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Fluoranthene	mg/kg	1,000	NS	NS	NS	19	1	1.8	1.1	3.5	1.1							
	4-Bromophenyl phenyl ether	mg/kg	100	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Bis(2-chloroisopropyl) ether	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	Bis(2-chloroisobutyl) methane	mg/kg	500	NS	NS	NS	1	U	0.38	U	0.2	U	0.2	U	0.24	U	0.72	U	
	Hexachlorobutadiene	mg/kg	30	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Hexachloroethane	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	Isochlorane	mg/kg	100	NS	NS	NS	0.83	U	0.31	U	0.17	U	0.16	U	0.2	U	0.6	U	
	Naphthalene	mg/kg	4	NS	NS	NS	11	0.42	0.34	0.18	U	0.18	U	0.51	0.67	U			
	Nitrobenzene	mg/kg	500	NS	NS	NS	0.83	U	0.31	U	0.17	U	0.16	U	0.2	U	0.6	U	
	Bis(2-Ethylhexyl)phthalate	mg/kg	90	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Butyl benzyl phthalate	mg/kg	100	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Di-n-butylphthalate	mg/kg	50	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Di-n-octylphthalate	mg/kg	1,000	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Dichethyl phthalate	mg/kg	10	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Dimethyl phthalate	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	Benzof(a)anthracene	mg/kg	7	NS	NS	NS	10	0.45	1.2	0.68	1.8	0.62	1.8	0.62	1.8	0.62	1.8	0.62	
	Benzof(a)pyrene	mg/kg	2	NS	NS	NS	10	0.5	1.3	0.66	1.8	0.69	1.8	0.69	1.8	0.69	1.8	0.69	
	Benzof(b)fluoranthene	mg/kg	7	NS	NS	NS	10	0.64	1.5	0.74	2.1	0.84	2.1	0.84	2.1	0.84	2.1	0.84	
	Benzof(k)fluoranthene	mg/kg	70	NS	NS	NS	3.9	0.21	0.56	0.29	0.67	0.41	0.67	0.41	0.67	0.41	0.67	0.41	
	Chrysene	mg/kg	70	NS	NS	NS	9.1	0.51	1.2	0.65	1.8	0.61	1.8	0.61	1.8	0.61	1.8	0.61	
	Acenaphthylene	mg/kg	1	NS	NS	NS	4.8	0.28	U	0.31	0.15	0.5	0.53	U	0.5	0.53	U	0.5	
	Anthracene	mg/kg	1,000	NS	NS	NS	8.1	0.21	U	0.41	0.18	0.76	0.4	U	0.18	0.76	0.4	U	
	Benzof(g,h)perylene	mg/kg	1,000	NS	NS	NS	6	0.32	0.88	0.46	1.1	0.53	U	0.35	0.67	U	0.35	0.67	
	Fluorene	mg/kg	1,000	NS	NS	NS	8.8	0.35	U	0.19	0.18	U	0.18	U	0.18	U	0.18	U	
	Phenanthrene	mg/kg	10	NS	NS	NS	24	0.82	0.97	0.57	0.46	1.5	0.62	1.5	0.62	1.5	0.62	1.5	
	Dibenzo(a,h)anthracene	mg/kg	0.7	NS	NS	NS	1	0.15	U	0.19	0.13	0.26	0.28	U	0.13	0.26	0.28	U	
	Indeno(1,2,3-cd)Pyrene	mg/kg	7	NS	NS	NS	6.4	0.34	0.94	0.54	1.2	0.53	U	0.34	1.1	0.53	U	0.34	
	Pyrene	mg/kg	1,000	NS	NS	NS	20	1	1.8	0.98	3.4	1.1	0.8	U	0.8	U	0.8	U	
	Aniline	mg/kg	1,000	NS	NS	NS	1.1	U	0.42	0.22	U	0.27	U	0.27	U	0.27	U	0.27	
	4-Chloroaniline	mg/kg	1	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	Dibenzofuran	mg/kg	100	NS	NS	NS	3.4	0.35	U	0.19	0.18	U	0.22	U	0.22	U	0.67	U	
	2-Methylnaphthalene	mg/kg	0.7	NS	NS	NS	6.6	0.15	U	0.18	0.077	U	0.28	U	0.28	U	0.28	U	
	Acetophenone	mg/kg	1,000	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U	
	2,4,6-Trichlorophenol	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	2-Chlorophenol	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	1,4-Dichlorophenol	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	2,4-Dimethylphenol	mg/kg	0.7	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
	2-Nitrophenol	mg/kg	2	NS	NS	NS	0.39	U	0.15	U	0.079	U	0.077	U	0.093	U	0.28	U	
4-Nitrophenol	mg/kg	100	NS	NS	NS	1.3	U	0.49	0.26	U	0.26	U	0.39	0.48	U	1.4	U		
2,4-Dinitrophenol	mg/kg	3	NS	NS	NS	4.4	U	1.7	0.9	0.88	U	1.1	U	3.2	U	3.2	U		
Pentachlorophenol	mg/kg	3	NS	NS	NS	1.8	U	0.7	0.38	U	0.36	U	0.44	U	1.3	U	1.3		
Phenol	mg/kg	1	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U		
2-Methylphenol	mg/kg	500	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U		
3/4-Methylphenol	mg/kg	NS	NS	NS	NS	1.3	U	0.5	0.27	U	0.26	U	0.32	U	0.96	U	0.96		
2,4,5-Trichlorophenol	mg/kg	4	NS	NS	NS	0.92	U	0.35	U	0.19	U	0.18	U	0.22	U	0.67	U		
Pyridine	mg/kg	500	NS	NS	NS	1	U	0.38	U	0.2	U	0.24	U	0.24	U	0.73	U		
Biphenyl	mg/kg	0.05	NS	NS	NS	NA	0.8	U	NA	0.42	U	0.045	0.13	U	0.13	U	0.13		
Total SVOCs	mg/kg	NS	100	100	100	168	6.21	13.8	6.95	21.8	5.58								
PCBs	Aroclor-1016	mg/kg	1	NS	NS	0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U		
	Aroclor-1221	mg/kg	1	NS	NS	0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U		
	Aroclor-1232	mg/kg	1	NS	NS	0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U		
	Aroclor-1242	mg/kg	1	NS	NS	0.236	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U	0.0480	U	
	Aroclor-1248	mg/kg	1	NS	NS	0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U		
	Aroclor-1254	mg/kg	1	NS	NS	0.0679	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U	0.0480	U	
	Aroclor-1260	mg/kg	1	NS	NS	0.0438	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U	0.0480	U	
	Aroclor-1262	mg/kg	1	NS	NS	0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U	0.0480	U
	Aroclor-1268	mg/kg	1	NS	NS	0.0369	U	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U	0.0480	U
	Total PCBs	mg/kg	1	2	2	0.367	0.0695	U	0.0372	U	0.0350	U	0.0434	U	0.0480	U	0.0480	U	

Table 2 -- Soil Characterization Analytical Results -- October, November, and December 2021 and January 2022
Washington Street
MBTA Green Line Extension Project

Sample Location:						GLC-NP-306A-18-C-DC		GLC-WASHPSSED-18-C-DC		GLC-WSPTOPCLEA-18-C-DC		NP-318B-02-DC		WASHPS20211-213-DC		WASHPUMP20-210805RU-GLC-	
Sample Name:						GLC-NP-306A-18-C-DC-COMP/CLC-NP-306A-18-C-DC-VOC-7		GLC-WASHPSSED10-2221-DC-COMP/CLC-WASHPSSED10-2221-DC-VOC-3		GLC-WSPTOPCLEA-N-DC-COMP/CLC-WSPTOPCLEA-N-DC-VOC-7		GLC-NP-318B-02-DC-COMP/CLC-NP-318B-02-DC-VOC-4		GLC-WASHPS20211-213-DC-COMP/CLC-WASHPS20211-213-DC-VOC-06		GLC-WASHPUMP20-210805RU-COMP/CLC-WASHPUMP20-210805RU-VOC-5	
Lab Sample ID:						L2154830-05/06/L2155291-02		L2161496-01/02		L2158092-01/02		L2162117-01/02		L2170050-01/02		L2201603-01/02	
Sample Depth:						N/A/7 ft		N/A/3 ft		N/A/7 ft		N/A/4 ft		N/A/6 ft		N/A/5 ft	
Sample Date:						10/7/2021		11/9/2021		10/22/2021		11/11/2021		12/20/2021		1/12/2022	
Analysis	Analyte	Unit	RCS-1	Unlined Landfill*	Lined Landfill*												
Pesticides																	
	Delta-BHC	mg/kg	10	NS	NS	0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Lindane	mg/kg	0.003	NS	NS	0.00588	U	0.00108	U	0.000587	U	0.000577	U	0.00198	U	0.000771	U
	Alpha-BHC	mg/kg	50	NS	NS	0.00735	U	0.00136	U	0.000733	U	0.000721	U	0.00247	U	0.000964	U
	Beta-BHC	mg/kg	10	NS	NS	0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Heptachlor	mg/kg	0.3	NS	NS	0.00882	U	0.00163	U	0.000880	U	0.000866	U	0.00297	U	0.00116	U
	Aldrin	mg/kg	0.08	NS	NS	0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Heptachlor epoxide	mg/kg	0.1	NS	NS	0.0331	U	0.00610	U	0.00330	U	0.00325	U	0.0111	U	0.00434	U
	Endrin	mg/kg	10	NS	NS	0.00735	U	0.00136	U	0.000733	U	0.000721	U	0.00247	U	0.000964	U
	Endrin ketone	mg/kg	10	NS	NS	0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Dieldrin	mg/kg	0.08	NS	NS	0.0110	U	0.00203	U	0.00110	U	0.00108	U	0.00371	U	0.00144	U
	4,4'-DDE	mg/kg	6	NS	NS	0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	4,4'-DDD	mg/kg	8	NS	NS	0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	4,4'-DDT	mg/kg	6	NS	NS	0.0397		0.00652		0.00330		0.00342	IP	0.0111	U	0.00434	U
	Endosulfan I	mg/kg	0.5	NS	NS	0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Endosulfan II	mg/kg	0.5	NS	NS	0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
	Endosulfan sulfate	mg/kg	0.5	NS	NS	0.00735	U	0.00136	U	0.000733	U	0.000721	U	0.00247	U	0.000964	U
	Methoxychlor	mg/kg	200	NS	NS	0.0331	U	0.00610	U	0.00330	U	0.00325	U	0.0111	U	0.00434	U
	Chlordane	mg/kg	0.7	NS	NS	0.147	U	0.0271	U	0.0147	U	0.0144	U	0.0495	U	0.0193	U
	Hexachlorobenzene	mg/kg	0.7	NS	NS	0.0176	U	0.00325	U	0.00176	U	0.00173	U	0.00594	U	0.00231	U
Herbicides																	
	MCPP	mg/kg	NS	NS	NS	3.7	U	7	U	3.8	U	3.7	U	4.5	U	4.7	U
	MCPA	mg/kg	100	NS	NS	3.7	U	7	U	3.8	U	3.7	U	4.5	U	4.7	U
	Dalapon	mg/kg	1,000	NS	NS	0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	Dicamba	mg/kg	500	NS	NS	0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	Dichloroprop	mg/kg	NS	NS	NS	0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	2,4-D	mg/kg	100	NS	NS	0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	2,4-DB	mg/kg	100	NS	NS	0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	2,4,5-T	mg/kg	100	NS	NS	0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
	2,4,5-TP (Silvex)	mg/kg	100	NS	NS	0.037	U	0.07	U	0.038	U	0.037	U	0.045	U	0.047	U
TPH																	
	Total Petroleum Hydrocarbons	mg/kg	1,000	2,500	5,000	4,340		174		408		120		2,160		770	
Metals, total																	
	Antimony	mg/kg	20	NS	NS	2.19	U	4.18	U	2.24	U	2.13	U	2.59	U	2.82	U
	Arsenic	mg/kg	20	40	40	5.36		9.18		3.44		3.85		5.11		5.55	
	Barium	mg/kg	1,000	NS	NS	38.0		92.1		24.1		35.8		39.8		53.4	
	Beryllium	mg/kg	90	NS	NS	0.237		0.619		0.287		0.255		0.301		0.366	
	Cadmium	mg/kg	70	30	80	0.657		1.08		0.449	U	0.425	U	0.518	U	0.564	U
	Chromium	mg/kg	100	1,000	1,000	12.1		37.3		16.0		12.7		16.9		20.3	
	Cobalt	mg/kg	200	1,000	2,000	134		80.9		38.9		60.5		91.7		72.9	
	Mercury	mg/kg	20	10	10	0.187		0.152	U	0.093		0.191		0.445		0.207	
	Nickel	mg/kg	600	NS	NS	9.30		25.9		10.9		10.2		12.2		14.5	
	Selenium	mg/kg	400	NS	NS	2.19	U	4.18	U	2.24	U	2.13	U	2.59	U	2.82	U
	Silver	mg/kg	100	NS	NS	0.438	U	0.837	U	0.449	U	0.425	U	0.518	U	0.564	U
	Thallium	mg/kg	8	NS	NS	2.19	U	4.18	U	2.24	U	2.13	U	2.59	U	2.82	U
	Vanadium	mg/kg	400	NS	NS	22.9		50.1		29.8		16.6		24.6		27.6	
	Zinc	mg/kg	1,000	NS	NS	160		148		67.6		62.6		96.5		101	
Metals, TCLP																	
	Lead	mg/L	5**	NS	NS	0.500	U	NA		NA		NA		NA		NA	
General Chemistry																	
	Ignitability		NS	NS	NS	NI		NI		NI		NI		NI		NI	
	Specific Conductance	umhos/cm	NS	4,000	8,000	110		110		68		93		110		86	
	pH	su	NS	2 - 12.5	2 - 12.5	7.6		8.2		8.0		8.2		7.4		7.4	
	Reactive Cyanide	mg/kg	NS	< 250	< 250	10	U	10	U	10	U	10	U	10	U	10	U
	Reactive Sulfide	mg/kg	NS	< 500	< 500	10	U	10	U	10	U	10	U	10	U	10	U

Notes:

mg/kg - milligrams per kilogram (dry weight) or parts per million (ppm).

mg/L - milligrams per liter.

su - Standard unit.

umhos/cm - Micro-mhos per centimeter.

1 - The lower value for the two columns has been reported due to obvious interference.

NA - Sample not analyzed for the listed analyte.

N/A - Not applicable/available.

NI - Not ignitable.

NS - No MassDEP standards exist for this analyte.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

U - Analyte was not detected at specified quantitation limit.

Values in bold indicate the analyte was detected.

Values shown in bold and shaded type exceed one or more of the listed MassDEP standards/criteria.

VOCs - Volatile Organic Compounds.

** - Reuse and Disposal of Contaminated Soil at Massachusetts Landfills, MassDEP Policy # COMM-97-001, August 1997.

** - EPA SW-846 Chapter 7, Table 7-1, Maximum Concentration of Contaminants for Toxicity Characteristic.

SVOCs - Semivolatile Organic Compounds.

PCBs - Polychlorinated Biphenyls.

RC - Reportable concentration.

TPH - Total Petroleum Hydrocarbons.

(1) - Value for C9-C10 aromatic used.

(2) - Criteria applicable to xylene (total), the sum of the xylene isomers.

(3) - Value for Dichloropropane used.

(4) - Value for Dichloropropane used.

(5) - Value for Chlorobenzene used.

< - Sample name for Other/VOC analysis.

<> - Lab Sample ID for Other/VOC/TCLP analysis; otherwise Lab Sample ID applied to Other/VOC analysis.

Table 2 - Soil Characterization Analytical Results
MBTA Green Line Extension Project
132 Washington Street
Somerville, Massachusetts
Release Tracking Number 3-34742
March 2022 - August 2022

LOCATION										GLC-WASHPUMPGAS030222-DC-COMP		GLC-WASHPUMPGAS030222-DC-VOC(1)		
SAMPLING DATE										3/11/2022		3/11/2022		
LAB SAMPLE ID										22C1091-01		22C1091-02		
SAMPLE TYPE										SOIL		SOIL		
	CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-L/LAND	MA-ULAND	Saugus	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
General Chemistry														
Specific Conductance @ 25 C	SC					8000	4000	2000		umhos/cm	30		-	-
Solids, Total	TSOLIDS									%	87.0		87.0	
pH (H)	12408-02-5							5-9	2-12.5	SU	8.8		-	-
Cyanide, Reactive	GIS-250-012							250	250	mg/kg	3.9	U	-	-
Sulfide, Reactive	RSULF							500	500	mg/kg	19	U	-	-
Ignitability of Solids														
Ignitability	IGNIT							>140°	NI		Absent		-	-
MCP Chlorinated Herbicides														
2,4-D	94-75-7		100	1000				10		mg/kg	0.11	U	-	-
2,4-DB	94-82-6		100	1000				10		mg/kg	0.11	U	-	-
2,4,5-TP (Silvex)	93-72-1		100	1000				10		mg/kg	0.011	U	-	-
2,4,5-T	93-76-5		100	1000				10		mg/kg	0.011	U	-	-
Dalapon	75-99-0		1000	10000				100		mg/kg	0.29	U	-	-
Dicamba	1918-00-9		500	5000				50		mg/kg	0.011	U	-	-
Dichloroprop	120-36-5							0.08		mg/kg	0.11	U	-	-
MCPA	94-74-6		100	1000				10		mg/kg	11	U	-	-
MCPP	93-65-2							3.3		mg/kg	11	U	-	-
MCP Organochlorine Pesticides														
Aldrin	309-00-2		0.08	0.5	0.7			0.05		mg/kg	0.11	U	-	-
Alpha-BHC	319-84-6		50	500				5		mg/kg	0.11	U	-	-
Beta-BHC	319-85-7		10	100				1		mg/kg	0.11	U	-	-
Delta-BHC	319-86-8		10	100				1		mg/kg	0.11	U	-	-
Lindane	58-89-9		0.003	0.5	0.46			0.0003		mg/kg	0.046	U	-	-
Chlordane	57-74-9		0.7	30	27			0.07		mg/kg	0.46	U	-	-
4,4'-DDD	72-54-8		8	40	14			0.8		mg/kg	0.092	U	-	-
4,4'-DDE	72-55-9		6	30	14			0.6		mg/kg	0.092	U	-	-
4,4'-DDT	50-29-3		6	30	14			0.6		mg/kg	0.092	U	-	-
Dieldrin	60-57-1		0.08	0.5	1			0.05		mg/kg	0.092	U	-	-
Endosulfan I	959-98-8		0.5	1	1.2			0.05		mg/kg	0.11	U	-	-
Endosulfan II	33213-65-9		0.5	1	1.2			0.05		mg/kg	0.18	U	-	-
Endosulfan sulfate	1031-07-8							0.008		mg/kg	0.18	U	-	-
Endrin	72-20-8		10	20	7			1		mg/kg	0.18	U	-	-
Endrin ketone	53494-70-5							0.008		mg/kg	0.18	U	-	-
Heptachlor	76-44-8		0.3	2	4.2			0.03		mg/kg	0.11	U	-	-
Heptachlor epoxide	1024-57-3		0.1	0.9	0.35			0.01		mg/kg	0.11	U	-	-
Hexachlorobenzene	118-74-1		0.7	0.8	15			0.07	0.8	mg/kg	0.14	U	-	-
Methoxychlor	72-43-5		200	400	140			20		mg/kg	1.1	U	-	-
MCP Polychlorinated Biphenyls														
Aroclor 1016	12674-11-2		1	4	1.6				4	mg/kg	0.092	U	-	-
Aroclor 1221	11104-28-2		1	4	1.6				4	mg/kg	0.092	U	-	-
Aroclor 1232	11141-16-5		1	4	1.6				4	mg/kg	0.092	U	-	-
Aroclor 1242	53469-21-9		1	4	1.6				4	mg/kg	0.092	U	-	-
Aroclor 1248	12672-29-6		1	4	1.6				4	mg/kg	0.092	U	-	-
Aroclor 1254	11097-69-1		1	4	1.6				4	mg/kg	0.092	U	-	-
Aroclor 1260	11096-82-5		1	4	1.6				4	mg/kg	0.092	U	-	-
Aroclor 1262	37324-23-5		1	4	1.6					mg/kg	0.092	U	-	-
Aroclor 1268	11100-14-4		1	4	1.6					mg/kg	0.092	U	-	-
PCBs, Total	1336-36-3		1	4	1.6	2	2	0.1	4	mg/kg	0.092	U	-	-
MCP Semivolatile Organics														
Biphenyl	92-52-4		0.05	6				0.005			0.77	U	-	-
Acenaphthene	83-32-9	0.5	4	3000	5000			4	69	mg/kg	0.099	J	-	-
Acenaphthylene	208-96-8	0.5	1	10	14			1	10	mg/kg	0.16	J	-	-
Acetophenone	98-86-2		1000	10000				100	2500	mg/kg	0.39	U	-	-
Aniline	62-53-3		1000	10000				100	2500	mg/kg	0.39	U	-	-
Anthracene	120-12-7	1	1000	3000	5000			1000	2500	mg/kg	0.43		-	-
Benzo(a)anthracene	56-55-3	2	7	40	160			7	40	mg/kg	1.2		-	-
Benzo(a)pyrene	50-32-8	2	2	7	16			2	7	mg/kg	1.3		-	-
Benzo(b)fluoranthene	205-99-2	2	7	40	160			7	40	mg/kg	1.5		-	-
Benzo(ghi)perylene	191-24-2	1	1000	3000	5000			1000	2500	mg/kg	0.64		-	-
Benzo(k)fluoranthene	207-08-9	1	70	400	1600			70	400	mg/kg	0.61		-	-
Bis(2-chloroethoxy)methane	111-91-1		500	5000				50	2500	mg/kg	0.39	U	-	-
Bis(2-chloroethyl)ether	111-44-4		0.7	0.7	4.7			0.1	0.7	mg/kg	0.39	U	-	-
Bis(2-chloroisopropyl)ether	108-60-1		0.7	0.7	74			0.1	0.7	mg/kg	0.39	U	-	-
Bis(2-ethylhexyl)phthalate	117-81-7		90	600	230			60	600	mg/kg	0.39	U	-	-
4-Bromophenyl phenyl ether	101-55-3		100	1000				10	500	mg/kg	0.39	U	-	-
Butyl benzyl phthalate	85-68-7		100	1000				10	500	mg/kg	0.39	U	-	-
4-Chloroaniline	106-47-8		1	3	3.3			0.1	3	mg/kg	0.76	U	-	-
2-Chloronaphthalene	91-58-7		1000	10000				100	2500	mg/kg	0.39	U	-	-
2-Chlorophenol	95-57-8		0.7	100	310			0.1	7	mg/kg	0.39	U	-	-
Chrysene	218-01-9	2	70	400	3400			70	400	mg/kg	1.2		-	-
Dibenzo(a,h)anthracene	53-70-3	0.5	0.7	4	16			0.7	4	mg/kg	0.19	J	-	-
Dibenzofuran	132-64-9		100	1000				100	500	mg/kg	0.15	J	-	-
Di-n-butylphthalate	84-74-2		50	500				5	375	mg/kg	0.39	U	-	-
1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	90	mg/kg	0.39	U	-	-
1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	30	mg/kg	0.39	U	-	-
1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	1	mg/kg	0.39	U	-	-
3,3'-Dichlorobenzidine	91-94-1		3	20	20			0.3	20	mg/kg	0.2	U	-	-
2,4-Dichlorophenol	120-83-2		0.7	40	40			0.1	7	mg/kg	0.39	U	-	-
Diethyl phthalate	84-66-2		10	200	290			1	75	mg/kg	0.39	U	-	-
2,4-Dimethylphenol	105-67-9		0.7	100	1300			0.1	7	mg/kg	0.39	U	-	-
Dimethyl phthalate	131-11-3		0.7	50	550			0.1	7	mg/kg	0.39	U	-	-
2,4-Dinitrophenol	51-28-5		3	50	45			0.3	30	mg/kg	0.76	U	-	-
2,4-Dinitrotoluene	121-14-2		0.7	10	36			0.1	7	mg/kg	0.39	U	-	-
2,6-Dinitrotoluene	606-20-2		100	1000				10	500	mg/kg	0.39	U	-	-
Di-n-octylphthalate	117-84-0		1000	10000				100	2500	mg/kg	0.39	U	-	-
Azobenzene	103-33-3		50	500				5	375	mg/kg	0.39	U	-	-
Fluoranthene	206-44-0	4	1000	3000	5000			1000	2500	mg/kg	2.2		-	-
Fluorene	86-73-7	1	1000	3000	5000			1000	2500	mg/kg	0.18	J	-	-

Table 2 - Soil Characterization Analytical Results
MBTA Green Line Extension Project
132 Washington Street
Somerville, Massachusetts
Release Tracking Number 3-34742
March 2022 - August 2022

LOCATION										GLC-WASHPUMPGAS030222-DC-COMP		GLC-WASHPUMPGAS030222-DC-VOC(1)		
SAMPLING DATE										3/11/2022		3/11/2022		
LAB SAMPLE ID										22C1091-01		22C1091-02		
SAMPLE TYPE										SOIL		SOIL		
	CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
Hexachlorobenzene	118-74-1		0.7	0.8	15			0.1	0.8	mg/kg	0.39	U	-	-
Hexachlorobutadiene	87-68-3		30	100	54			3	100	mg/kg	0.39	U	-	-
Hexachloroethane	67-72-1		0.7	3	74			0.1	3	mg/kg	0.39	U	-	-
Indeno(1,2,3-cd)pyrene	193-39-5	1	7	40	160			7	40	mg/kg	0.70		-	-
Isophorone	78-59-1		100	1000				10	500	mg/kg	0.39	U	-	-
2-Methylnaphthalene	91-57-6	0.5	0.7	80	240			0.7	25	mg/kg	0.18	J	-	-
2-Methylphenol	95-48-7		500	5000				50	2500	mg/kg	0.39	U	-	-
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		500	5000				50	2500	mg/kg	0.39	U	-	-
Naphthalene	91-20-3	0.5	4	20	3000			4	20	mg/kg	0.32		-	-
Nitrobenzene	98-95-3		500	5000				50	2500	mg/kg	0.39	U	-	-
2-Nitrophenol	88-75-5		100	1000				10	500	mg/kg	0.39	U	-	-
4-Nitrophenol	100-02-7		100	1000				10	500	mg/kg	0.76	U	-	-
Pentachlorophenol	87-86-5		3	10	13			0.3	10	mg/kg	0.39	U	-	-
Phenanthrene	85-01-8	3	10	1000	3000			10	532.5	mg/kg	1.2		-	-
Phenol	108-95-2		1	20	16			0.1	10	mg/kg	0.39	U	-	-
Pyrene	129-00-0	4	1000	3000	5000			1000	2500	mg/kg	2.3		-	-
Pyridine	110-86-1		500	5000				50		mg/kg	0.39	U	-	-
1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	6	mg/kg	0.39	U	-	-
2,4,5-Trichlorophenol	95-95-4		4	600	580			0.4	40	mg/kg	0.39	U	-	-
2,4,6-Trichlorophenol	88-06-2		0.7	20	19			0.1	7	mg/kg	0.39	U	-	-
Total SVOCs						100	100			mg/kg	14.559	J	-	-
MCP Total Metals														
Antimony, Total	7440-36-0	1	20	30	16			20	30	mg/kg	1.9	U	-	-
Arsenic, Total	7440-38-2	20	20	20	11	40	40	20	20	mg/kg	4.1		-	-
Barium, Total	7440-39-3	50	1000	3000	2100			1000	2500	mg/kg	38		-	-
Beryllium, Total	7440-41-7	0.4	90	200	10			90	200	mg/kg	0.38		-	-
Cadmium, Total	7440-43-9	2	70	100	16	80	30	70	100	mg/kg	0.38	U	-	-
Chromium, Total	7440-47-3	30	100	200	570	1000	1000	100	200	mg/kg	23		-	-
Lead, Total	7439-92-1	100	200	600	110	2000	1000	200	600	mg/kg	32		-	-
Mercury, Total	7439-97-6	0.3	20	30	16	10	10	20	30	mg/kg	0.17		-	-
Nickel, Total	7440-02-0	20	600	1000	350			600	1000	mg/kg	19		-	-
Selenium, Total	7782-49-2	0.5	400	700	390			400	700	mg/kg	3.8	U	-	-
Silver, Total	7440-22-4	0.6	100	200	110			100	200	mg/kg	0.38	U	-	-
Thallium, Total	7440-28-0	0.6	8	60	37			8	60	mg/kg	1.9	U	-	-
Vanadium, Total	7440-62-2	30	400	700	530			400	700	mg/kg	42		-	-
Zinc, Total	7440-66-6	100	1000	3000	5000			1000	2500	mg/kg	65		-	-
MCP Volatile Organics by EPA 5035														
Acetone	67-64-1		6	50	350			0.6	50	mg/kg	-	-	0.074	U
Tertiary-Amyl Methyl Ether	994-05-8							0.01		mg/kg	-	-	0.00074	U
Benzene	71-43-2		2	200	540			0.2	20	mg/kg	-	-	0.0015	U
Bromobenzene	108-86-1		100	1000				10	500	mg/kg	-	-	0.0015	U
Bromochloromethane	74-97-5							0.01		mg/kg	-	-	0.0015	U
Bromodichloromethane	75-27-4		0.1	0.1	460			0.1	0.1	mg/kg	-	-	0.0015	U
Bromoform	75-25-2		0.1	1	800			0.1	1	mg/kg	-	-	0.0015	U
Bromomethane	74-83-9		0.5	0.5	32			0.1	0.5	mg/kg	-	-	0.0074	U
Methyl ethyl ketone	78-93-3		4	50	350			0.4	40	mg/kg	-	-	0.029	U
n-Butylbenzene	104-51-8							0.01	500	mg/kg	-	-	0.0015	U
sec-Butylbenzene	135-98-8							0.01	500	mg/kg	-	-	0.0015	U
tert-Butylbenzene	98-06-6		100	1000				10	500	mg/kg	-	-	0.0015	U
Ethyl-Tert-Butyl-Ether	637-92-3							0.01		mg/kg	-	-	0.00074	U
Carbon disulfide	75-15-0		100	1000				10	500	mg/kg	-	-	0.0074	U
Carbon tetrachloride	56-23-5		5	5	220			0.5	5	mg/kg	-	-	0.0015	U
Chlorobenzene	108-90-7		1	3	110			0.1	3	mg/kg	-	-	0.0015	U
Dibromochloromethane	124-48-1		0.005	0.03	340			0.0005	0.03	mg/kg	-	-	0.00074	U
Chloroethane	75-00-3		100	1000				10	500	mg/kg	-	-	0.015	U
Chloroform	67-66-3		0.2	0.2	410			0.1	0.2	mg/kg	-	-	0.0029	U
Chloromethane	74-87-3		100	1000				10	500	mg/kg	-	-	0.0074	U
o-Chlorotoluene	95-49-8		100	1000				10	500	mg/kg	-	-	0.0015	U
p-Chlorotoluene	106-43-4							0.01	500	mg/kg	-	-	0.0015	U
1,2-Dibromo-3-chloropropane	96-12-8		10	100				1	75	mg/kg	-	-	0.0015	U
1,2-Dibromoethane	106-93-4		0.1	0.1	0.33			0.1	0.1	mg/kg	-	-	0.00074	U
Dibromomethane	74-95-3		500	5000				50	2500	mg/kg	-	-	0.0015	U
1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	90	mg/kg	-	-	0.0015	U
1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	30	mg/kg	-	-	0.0015	U
1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	1	mg/kg	-	-	0.0015	U
Dichlorodifluoromethane	75-71-8		1000	10000				100	2500	mg/kg	-	-	0.015	U
1,1-Dichloroethane	75-34-3		0.4	9	1300			0.1	4	mg/kg	-	-	0.0015	U
1,2-Dichloroethane	107-06-2		0.1	0.1	310			0.1	0.1	mg/kg	-	-	0.0015	U
1,1-Dichloroethene	75-35-4		3	40	1600			0.3	30	mg/kg	-	-	0.0029	U
cis-1,2-Dichloroethene	156-59-2		0.1	0.1	500			0.1	0.1	mg/kg	-	-	0.0015	U
trans-1,2-Dichloroethene	156-60-5		1	1	2500			0.1	1	mg/kg	-	-	0.0015	U
1,2-Dichloropropane	78-87-5		0.1	0.1	280			0.1	0.1	mg/kg	-	-	0.0015	U
1,3-Dichloropropane	142-28-9		500	5000				50	2500	mg/kg	-	-	0.00074	U
2,2-Dichloropropane	594-20-7							0.01	0.1	mg/kg	-	-	0.0015	U
1,1-Dichloropropene	563-58-6							0.01	0.1	mg/kg	-	-	0.0015	U
cis-1,3-Dichloropropene	10061-01-5		0.01	0.4	140			0.001	0.1	mg/kg	-	-	0.00074	U
trans-1,3-Dichloropropene	10061-02-6		0.01	0.4	140			0.001	0.1	mg/kg	-	-	0.00074	U
Diethyl ether	60-29-7		100	1000				10	500	mg/kg	-	-	0.015	U
Diisopropyl Ether	108-20-3		100	1000				10	500	mg/kg	-	-	0.00074	U
1,4-Dioxane	123-91-1		0.2	6	450			0.1	2	mg/kg	-	-	0.074	U
Ethylbenzene	100-41-4		40	1000	230			4	300	mg/kg	-	-	0.0015	U
Hexachlorobutadiene	87-68-3		30	100	54			3	100	mg/kg	-	-	0.0015	U
2-Hexanone	591-78-6		100	1000				10	500	mg/kg	-	-	0.015	U
Isopropylbenzene	98-82-8		1000	10000				100	2500	mg/kg	-	-	0.0015	U
p-Isopropyltoluene	99-87-6		100	1000				10	500	mg/kg	-	-	0.0015	U
Methyl tert butyl ether	1634-04-4		0.1	100	500			0.1	1.9	mg/kg	-	-	0.0029	U
Methylene chloride	75-09-2		0.1	4	900			0.1	1	mg/kg	-	-	0.015	U
Methyl isobutyl ketone	108-10-1		0.4	50	400			0.1	4	mg/kg	-	-	0.015	U
Naphthalene	91-20-3	0.5	4	20	3000			4	20	mg/kg	-	-	0.0029	U

Table 2 - Soil Characterization Analytical Results
MBTA Green Line Extension Project
132 Washington Street
Somerville, Massachusetts
Release Tracking Number 3-34742
March 2022 - August 2022

LOCATION										GLC-WASHPUMPGAS030222-DC-COMP		GLC-WASHPUMPGAS030222-DC-VOC(1)			
SAMPLING DATE										3/11/2022		3/11/2022			
LAB SAMPLE ID										22C1091-01		22C1091-02			
SAMPLE TYPE										SOIL		SOIL			
		CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
	n-Propylbenzene	103-65-1		100	1000				10	500	mg/kg	-	-	0.0015	U
	Styrene	100-42-5		3	4	630			0.3	4	mg/kg	-	-	0.0015	U
	1,1,1,2-Tetrachloroethane	630-20-6		0.1	0.1	150			0.1	0.1	mg/kg	-	-	0.0015	U
	1,1,2,2-Tetrachloroethane	79-34-5		0.005	0.02	19			0.0005	0.02	mg/kg	-	-	0.00074	U
	Tetrachloroethene	127-18-4		1	10	370			0.1	10	mg/kg	-	-	0.0085	
	Tetrahydrofuran	109-99-9		500	5000				50	2500	mg/kg	-	-	0.0074	U
	Toluene	108-88-3		30	1000	520			3	225	mg/kg	-	-	0.0015	U
	1,2,3-Trichlorobenzene	87-61-6							0.01		mg/kg	-	-	0.0015	U
	1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	6	mg/kg	-	-	0.0015	U
	1,1,1-Trichloroethane	71-55-6		30	600	1400			3	225	mg/kg	-	-	0.0015	U
	1,1,2-Trichloroethane	79-00-5		0.1	2	91			0.1	1	mg/kg	-	-	0.0015	U
	Trichloroethene	79-01-6		0.3	0.3	810			0.1	0.3	mg/kg	-	-	0.0015	U
	Trichlorofluoromethane	75-69-4		1000	10000				100	2500	mg/kg	-	-	0.0074	U
	1,2,3-Trichloropropane	96-18-4		100	1000				10	500	mg/kg	-	-	0.0015	U
	1,2,4-Trimethylbenzene	95-63-6		1000	10000				100	2500	mg/kg	-	-	0.0015	U
	1,3,5-Trimethylbenzene	108-67-8		10	100				1	75	mg/kg	-	-	0.0015	U
	Vinyl chloride	75-01-4		0.7	0.7	12			0.1	0.7	mg/kg	-	-	0.0074	U
	p/m-Xylene	179601-23-1		100	100	270			10	100	mg/kg	-	-	0.0029	U
	o-Xylene	95-47-6		100	100	270			10	100	mg/kg	-	-	0.0015	U
	Total VOCs						10	4			mg/kg	-	-	0.0085	
Petroleum Hydrocarbon Quantitation															
	TPH (C9-C36)	TPHC9-C36		1000	3000	500	5000	2500	500	2500	mg/kg	760		-	-

Yellow shading indicates detected result is equal to or above one or more of the listed criteria, except for MA Background Level Natural soil.

Gray shading indicates nondetect detection limit is above one or more of the listed criteria, except for MA Background Level Natural soil.

RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.

RCS-2-14: MCP 2014 RCS-2 Reportable Concentrations Criteria effective April 25, 2014.

BUD-S3/G3: MassDEP Proposed S3, GW-3 Beneficial Use Determination (BUD) Values Criteria per Draft Interim Guidance Document effective March 18, 2004.

MA-BLNS: Background Level Natural soil current as of 10/24/07

MA-LLAND: Lined Landfill Limits current as of August, 1997

MA-ULAND: UnLined Landfill Limits current as of August, 1997

TRC-SSSR-GLX: Site Specific Soil Reuse Criteria: Vehicle Maintenance Facility for GLX Project Criteria per client-provided Table X February 21, 2018.

Saugus: Acceptance Criteria for Aggregate Industries - Saugus Quarry, Table 1.

U - Not detected at the reported detection limit for the sample.

J - Estimated value.

Table 2 - 2022 Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
July 27, 2022

LOCATION										GLC-WASHPUMPGRADING-062322-DC-VOC(7)	GLC-WASHPUMPGRADING-062322-DC-COMP
SAMPLING DATE										7/27/2022	7/27/2022
LAB SAMPLE ID										1.2240165-01	1.2240165-02
SAMPLE TYPE										SOIL	SOIL
REUSE/DISPOSAL FACILITY										MA Unlined Landfill	MA Unlined Landfill
Units										Results	Qual
Results										Results	Qual
General Chemistry	CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	
Specific Conductance @ 25 C	NONE					8000	4000	2000	2000	umhos/cm	200
Solids, Total	NONE									%	96.6
pH (H)	12408-02-5							5-9	5-9	SU	8
Cyanide, Reactive	57-12-5							250	250	mg/kg	10
Sulfide, Reactive	NONE							500	500	mg/kg	10
Ignitability of Solids											
Ignitability	NONE							>140*	Not Ignitable (NI)	NI	NI
MCP Chlorinated Herbicides											
MCP	93-65-2							3.3		mg/kg	3.4
MCPA	94-74-6		100	1000				10	100	mg/kg	3.4
Dalapon	75-99-0		1000	10000				100	1000	mg/kg	0.034
Dicamba	1918-00-9		500	5000				50	500	mg/kg	0.034
Dichloroprop	120-36-5							0.08		mg/kg	0.034
2,4-D	94-75-7		100	1000				10	100	mg/kg	0.034
2,4-DB	94-82-6		100	1000				10	100	mg/kg	0.034
2,4,5-T	93-76-5		100	1000				10	100	mg/kg	0.034
2,4,5-TP (Silvex)	93-72-1		100	1000				10	100	mg/kg	0.034
MCP Organochlorine Pesticides											
Delta-BHC	319-86-8		10	100				1	10	mg/kg	0.00159
Lindane	58-89-9		0.003	0.5	0.46			0.0003	0.05	mg/kg	0.00053
Alpha-BHC	319-84-6		50	500				5	50	mg/kg	0.000663
Beta-BHC	319-85-7		10	100				1	10	mg/kg	0.00159
Heptachlor	76-44-8		0.3	2	4.2			0.05	0.2	mg/kg	0.000796
Aldrin	309-00-2		0.08	0.5	0.7			0.05	0.05	mg/kg	0.00159
Heptachlor epoxide	1024-57-3		0.1	0.9	0.35			0.05	0.09	mg/kg	0.00298
Endrin	72-20-8		10	20	7			1	2	mg/kg	0.000663
Endrin ketone	53494-70-5							0.008		mg/kg	0.00159
Dieldrin	60-57-1		0.08	0.5	1			0.05	0.05	mg/kg	0.000995
4,4'-DDE	72-55-9		6	30	14			0.6	3	mg/kg	0.00159
4,4'-DDD	72-54-8		8	40	14			0.8	4	mg/kg	0.00159
4,4'-DDT	50-29-3		6	30	14			0.6	3	mg/kg	0.00298
Endosulfan I	959-98-8		0.5	1	1.2			0.05	0.1	mg/kg	0.00159
Endosulfan II	33213-65-9		0.5	1	1.2			0.05	0.1	mg/kg	0.00159
Endosulfan sulfate	1031-07-8							0.008		mg/kg	0.000663
Methoxychlor	72-43-5		200	400	140			20	40	mg/kg	0.00298
Chlordane	57-74-9		0.7	30	27			0.07	3	mg/kg	0.0133
Hexachlorobenzene	118-74-1		0.7	0.8	15			0.07	0.08	mg/kg	0.00159
MCP Polychlorinated Biphenyls											
Aroclor 1016	12674-11-2		1	4	1.6				4	mg/kg	0.0326
Aroclor 1221	11104-28-2		1	4	1.6				4	mg/kg	0.0326
Aroclor 1232	11141-16-5		1	4	1.6				4	mg/kg	0.0326
Aroclor 1242	53469-21-9		1	4	1.6				4	mg/kg	0.0326
Aroclor 1248	12672-29-6		1	4	1.6				4	mg/kg	0.0326
Aroclor 1254	11097-69-1		1	4	1.6				4	mg/kg	0.0326
Aroclor 1260	11096-82-5		1	4	1.6				4	mg/kg	0.0326
Aroclor 1262	37324-23-5		1	4	1.6				4	mg/kg	0.0326
Aroclor 1268	11100-14-4		1	4	1.6				4	mg/kg	0.0326
PCBs, Total	1336-36-3		1	4	1.6	2	2	0.1	0.1	4	0.0326
MCP Semivolatile Organics											
Acenaphthene	83-32-9	0.5	4	3000	5000			4	5	69	0.45
1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.6	6	0.17
Hexachlorobenzene	118-74-1		0.7	0.8	15			0.1	0.08	0.8	0.071
Bis(2-chloroethyl)ether	111-44-4		0.7	0.7	4.7			0.1	0.07	0.7	0.071
2-Chloronaphthalene	91-58-7		1000	10000				100	100	2500	0.17
1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	10	90	0.17
1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	20	30	0.17
1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.1	1	0.071
3,3'-Dichlorobenzidine	91-94-1		3	20	20			0.3	2	20	0.17
2,4-Dinitrotoluene	121-14-2		0.7	10	36			0.1	1	7	0.071
2,6-Dinitrotoluene	606-20-2		100	1000				10	100	500	0.17
Azobenzene	103-33-3		50	500				5	50	375	0.17
Fluoranthene	206-44-0	4	1000	3000	5000			1000	40	2500	0.17
4-Bromophenyl phenyl ether	101-55-3		100	1000				10	100	500	0.17
Bis(2-chloroisopropyl)ether	108-60-1		0.7	0.7	74			0.1	0.07	0.7	0.071
Bis(2-chloroethoxy)methane	111-91-1		500	5000				50	100	2500	0.18
Hexachlorobutadiene	87-68-3		30	100	54			3	10	100	0.17
Hexachloroethane	67-72-1		0.7	3	74			0.1	0.3	3	0.071
Isophorone	78-59-1		100	1000				10	100	500	0.15
Naphthalene	91-20-3	0.5	4	20	3000			4	5	20	1.4
Nitrobenzene	98-95-3		500	5000				50	100	2500	0.15
Bis(2-ethylhexyl)phthalate	117-81-7		90	600	230			60	60	600	0.17
Butyl benzyl phthalate	85-68-7		100	1000				10	100	500	0.17
Di-n-butylphthalate	84-74-2		50	500				5	50	375	0.17
Di-n-octylphthalate	117-84-0		1000	10000				100	100	2500	0.17

Table 2 - 2022 Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
July 27, 2022

LOCATION										GLC-WASHPUMPGRADING-062322-DC-VOC(7)	GLC-WASHPUMPGRADING-062322-DC-COMP
SAMPLING DATE										7/27/2022	7/27/2022
LAB SAMPLE ID										1.2240165-01	1.2240165-02
SAMPLE TYPE										SOIL	SOIL
REUSE/ DISPOSAL FACILITY										MA Unlined Landfill	
										Results	Qual
										Results	Qual
CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	
Diethyl phthalate	84-68-2	10	200	290			1	20	75	mg/kg	0.17
Dimethyl phthalate	131-11-3	0.7	50	550			0.1	5	7	mg/kg	0.071
Benzo(a)anthracene	56-55-3	2	7	40	160		7	20	40	mg/kg	3.7
Benzo(a)pyrene	50-32-8	2	2	7	16		2	7	7	mg/kg	4.6
Benzo(b)fluoranthene	205-99-2	2	7	40	160		7	20	40	mg/kg	4.8
Benzo(k)fluoranthene	207-08-9	1	70	400	1600		70	10	400	mg/kg	1.6
Chrysene	218-01-9	2	70	400	3400		70	20	400	mg/kg	3.7
Acenaphthylene	208-96-8	0.5	1	10	14		1	5	10	mg/kg	1.4
Anthracene	120-12-7	1	1000	3000	5000		1000	10	2500	mg/kg	2.2
Benzo(ghi)perylene	191-24-2	1	1000	3000	5000		1000	10	2500	mg/kg	2.7
Fluorene	86-73-7	1	1000	3000	5000		1000	10	2500	mg/kg	0.76
Phenanthrene	85-01-8	3	10	1000	3000		10	30	532.5	mg/kg	4.4
Dibenzo(a,h)anthracene	53-70-3	0.5	0.7	4	16		0.7	4	4	mg/kg	0.6
Indeno(1,2,3-cd)pyrene	193-39-5	1	7	40	160		7	10	40	mg/kg	3.1
Pyrene	129-00-0	4	1000	3000	5000		1000	40	2500	mg/kg	5.9
Aniline	62-53-3		1000	10000			100	100	2500	mg/kg	0.2
4-Chloroaniline	106-47-8		1	3	3.3		0.1	0.3	3	mg/kg	0.17
Dibenzofuran	132-64-9		100	1000			100	100	500	mg/kg	0.47
2-Methylnaphthalene	91-57-6	0.5	0.7	80	240		0.7	5	25	mg/kg	0.78
Acetophenone	98-86-2		1000	10000			100	100	2500	mg/kg	0.17
2,4,6-Trichlorophenol	88-06-2		0.7	20	19		0.1	2	7	mg/kg	0.071
2-Chlorophenol	95-57-8		0.7	100	310		0.1	100	7	mg/kg	0.071
2,4-Dichlorophenol	120-83-2		0.7	40	40		0.1	4	7	mg/kg	0.071
2,4-Dimethylphenol	105-67-9		0.7	100	1300		0.1	10	7	mg/kg	0.071
2-Nitrophenol	88-75-5		100	1000			10	100	500	mg/kg	0.36
4-Nitrophenol	100-02-7		100	1000			10	100	500	mg/kg	0.24
2,4-Dinitrophenol	51-28-5		3	50	45		0.3	5	30	mg/kg	0.81
Pentachlorophenol	87-86-5		3	10	13		0.3	1	10	mg/kg	0.34
Phenol	108-95-2		1	20	16		0.1	2	10	mg/kg	0.17
2-Methylphenol	95-48-7		500	5000			50	100	2500	mg/kg	0.17
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		500	5000			50	100	2500	mg/kg	0.24
2,4,5-Trichlorophenol	95-95-4		4	600	580		0.4	60	40	mg/kg	0.17
Pyridine	110-86-1		500	5000			50	100		mg/kg	0.18
Biphenyl	92-52-4	0.05	6				0.005	0.6		mg/kg	0.14
Total SVOCs					100	100				mg/kg	48.7
MCP Total Metals											
Antimony, Total	7440-36-0	1	20	30	16		20	10	30	mg/kg	2.04
Arsenic, Total	7440-38-2	20	20	20	11	40	40	20	20	mg/kg	3.46
Barium, Total	7440-39-3	50	1000	3000	2100		1000	375	2500	mg/kg	22.9
Beryllium, Total	7440-41-7	0.4	90	200	10		90	4	200	mg/kg	0.204
Cadmium, Total	7440-43-9	2	70	100	16	80	30	70	100	mg/kg	0.409
Chromium, Total	7440-47-3	30	100	200	570	1000	1000	100	200	mg/kg	9.94
Lead, Total	7439-92-1	100	200	600	110	2000	1000	200	500	mg/kg	43.2
Mercury, Total	7439-97-6	0.3	20	30	16	10	10	20	3	mg/kg	0.139
Nickel, Total	7440-02-0	20	600	1000	350		600	150	1000	mg/kg	8
Selenium, Total	7782-49-2	0.5	400	700	390		400	5	700	mg/kg	2.04
Silver, Total	7440-22-4	0.6	100	200	110		100	6	200	mg/kg	0.409
Thallium, Total	7440-28-0	0.6	8	60	37		8	6	60	mg/kg	2.04
Vanadium, Total	7440-62-2	30	400	700	530		400	225	700	mg/kg	18.9
Zinc, Total	7440-66-6	100	1000	3000	5000		1000	500	2500	mg/kg	53.4
MCP Volatile Organics by EPA 5035											
Methylene chloride	75-09-2		0.1	4	900		0.1	0.01	1	mg/kg	0.0052
1,1-Dichloroethane	75-34-3		0.4	9	1300		0.1	0.04	4	mg/kg	0.001
Chloroform	67-66-3		0.2	0.2	410		0.1	0.02	0.2	mg/kg	0.0016
Carbon tetrachloride	56-23-5		5	5	220		0.5	0.5	5	mg/kg	0.001
1,2-Dichloropropane	78-87-5		0.1	0.1	280		0.1	0.01	0.1	mg/kg	0.001
Dibromochloromethane	124-48-1		0.005	0.03	340		0.0005	0.0005	0.03	mg/kg	0.001
1,1,2-Trichloroethane	79-00-5		0.1	2	91		0.1	0.01	1	mg/kg	0.001
Tetrachloroethane	127-18-4		1	10	370		0.1	0.1	10	mg/kg	0.00058
Chlorobenzene	108-90-7		1	3	110		0.1	0.1	3	mg/kg	0.00052
Trichlorofluoromethane	75-69-4		1000	10000			100	100	2500	mg/kg	0.0042
1,2-Dichloroethane	107-06-2		0.1	0.1	310		0.1	0.01	0.1	mg/kg	0.001
1,1,1-Trichloroethane	71-55-6		30	800	1400		3	3	225	mg/kg	0.0052
Bromodichloromethane	75-27-4		0.1	0.1	460		0.1	0.01	0.1	mg/kg	0.00052
trans-1,3-Dichloropropene	10061-02-6		0.01	0.4	140		0.001	0.001	0.1	mg/kg	0.001
cis-1,3-Dichloropropene	10061-01-5		0.01	0.4	140		0.001	0.001	0.1	mg/kg	0.00052
1,3-Dichloropropene, Total	542-75-6		0.01	0.4	140		0.001	0.001	0.1	mg/kg	0.00052
1,1-Dichloropropene	563-58-6						0.01	0.001	0.1	mg/kg	0.00052
Bromoform	75-25-2		0.1	1	800		0.1	0.01	1	mg/kg	0.0042
1,1,2,2-Tetrachloroethane	79-34-5		0.005	0.02	19		0.0005	0.0005	0.02	mg/kg	0.00052
Benzene	71-43-2		2	200	540		0.2	0.2	20	mg/kg	0.00052
Toluene	108-88-3		30	1000	520		3	3	225	mg/kg	0.001
Ethylbenzene	100-41-4		40	1000	230		4	4	300	mg/kg	0.001
Chloromethane	74-87-3		100	1000			10	10	500	mg/kg	0.0042
Bromomethane	74-83-9		0.5	0.5	32		0.1	0.05	0.5	mg/kg	0.0021
Vinyl chloride	75-01-4		0.7	0.7	12		0.1	0.07	0.7	mg/kg	0.001
Chloroethane	75-00-3		100	1000			10	10	500	mg/kg	0.0021
1,1-Dichloroethene	75-35-4		3	40	1600		0.3	0.3	30	mg/kg	0.001

Table 2 - 2022 Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
July 27, 2022

LOCATION										GLC-WASHPUMPGRADING-062322-DC-VOC(7)		GLC-WASHPUMPGRADING-062322-DC-COMP			
SAMPLING DATE										7/27/2022		7/27/2022			
LAB SAMPLE ID										L2240165-01		L2240165-02			
SAMPLE TYPE										SOIL		SOIL			
REUSE/ DISPOSAL FACILITY										MA Unlined Landfill		MA Unlined Landfill			
	CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
trans-1,2-Dichloroethene	156-60-5		1		2500			0.1	0.1	1	mg/kg	0.0018	U	-	-
Trichloroethene	79-01-6		0.3	0.3	810			0.1	0.03	0.3	mg/kg	0.00052	U	-	-
1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	0.9	90	mg/kg	0.0021	U	-	-
1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	0.3	30	mg/kg	0.0021	U	-	-
1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.07	1	mg/kg	0.0021	U	-	-
Methyl tert butyl ether	1634-04-4		0.1	100	500			0.1	0.01	1.9	mg/kg	0.0021	U	-	-
p/m-Xylene	179601-23-1		100	100	270			10	10	100	mg/kg	0.0021	U	-	-
o-Xylene	95-47-6		100	100	270			10	10	100	mg/kg	0.001	U	-	-
Xylenes, Total	1330-20-7		100	100	270			10	10	100	mg/kg	0.001	U	-	-
cis-1,2-Dichloroethene	156-59-2		0.1	0.1	500			0.1	0.01	0.1	mg/kg	0.001	U	-	-
1,2-Dichloroethene, Total	540-59-0		0.3					0.1		0.4	mg/kg	0.001	U	-	-
Dibromomethane	74-95-3		500	5000				50	50	2500	mg/kg	0.0021	U	-	-
1,2,3-Trichloropropane	96-18-4		100	1000				10	10	500	mg/kg	0.0021	U	-	-
Styrene	100-42-5		3	4	630			0.3	0.3	4	mg/kg	0.001	U	-	-
Dichlorodifluoromethane	75-71-8		1000	10000				100	100	2500	mg/kg	0.01	U	-	-
Acetone	67-64-1		6	50	350			0.6	0.6	50	mg/kg	0.049	U	-	-
Carbon disulfide	75-15-0		100	1000				10	10	500	mg/kg	0.01	U	-	-
Methyl ethyl ketone	78-93-3		4	50	350			0.4	0.4	40	mg/kg	0.01	U	-	-
Methyl isobutyl ketone	108-10-1		0.4	50	400			0.1	0.04	4	mg/kg	0.01	U	-	-
2-Hexanone	591-78-6		100	1000				10	10	500	mg/kg	0.01	U	-	-
Bromochloromethane	74-97-5							0.01			mg/kg	0.0021	U	-	-
Tetrahydrofuran	109-99-9		500	5000				50	50	2500	mg/kg	0.0042	U	-	-
2,2-Dichloropropane	594-20-7							0.01	0.01	0.1	mg/kg	0.0021	U	-	-
1,2-Dibromoethane	106-93-4		0.1	0.1	0.33			0.1	0.01	0.1	mg/kg	0.001	U	-	-
1,3-Dichloropropane	142-28-9		500	5000				50	50	2500	mg/kg	0.0021	U	-	-
1,1,1,2-Tetrachloroethane	630-20-6		0.1	0.1	150			0.1	0.01	0.1	mg/kg	0.00052	U	-	-
Bromobenzene	108-86-1		100	1000				10	10	500	mg/kg	0.0021	U	-	-
n-Butylbenzene	104-51-8							0.01		500	mg/kg	0.001	U	-	-
sec-Butylbenzene	135-98-8							0.01		500	mg/kg	0.001	U	-	-
tert-Butylbenzene	98-06-6		100	1000				10	10	500	mg/kg	0.0021	U	-	-
o-Chlorotoluene	95-49-8		100	1000				10	10	500	mg/kg	0.0021	U	-	-
p-Chlorotoluene	106-43-4							0.01	1	500	mg/kg	0.0021	U	-	-
1,2-Dibromo-3-chloropropane	96-12-8		10	100				1	1	75	mg/kg	0.0031	U	-	-
Hexachlorobutadiene	87-68-3		30	100	54			3	3	100	mg/kg	0.0042	U	-	-
Isopropylbenzene	98-82-8		1000	10000				100	100	2500	mg/kg	0.001	U	-	-
p-Isopropyltoluene	99-87-6		100	1000				10	10	500	mg/kg	0.001	U	-	-
Naphthalene	91-20-3	0.5	4	20	3000			4	0.4	20	mg/kg	0.0042	U	-	-
n-Propylbenzene	103-65-1		100	1000				10	10	500	mg/kg	0.001	U	-	-
1,2,3-Trichlorobenzene	87-61-6							0.01			mg/kg	0.0021	U	-	-
1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.2	6	mg/kg	0.0021	U	-	-
1,3,5-Trimethylbenzene	108-67-8		10	100				1	1	75	mg/kg	0.0021	U	-	-
1,2,4-Trimethylbenzene	95-63-6		1000	10000				100	100	2500	mg/kg	0.0021	U	-	-
Diethyl ether	60-29-7		100	1000				10	10	500	mg/kg	0.0021	U	-	-
Diisopropyl Ether	108-20-3		100	1000				10	10	500	mg/kg	0.0021	U	-	-
Ethyl-Tert-Butyl-Ether	637-92-3							0.01			mg/kg	0.0021	U	-	-
Tertiary-Amyl Methyl Ether	994-05-8							0.01			mg/kg	0.0021	U	-	-
1,4-Dioxane	123-91-1		0.2	6	450			0.1	0.02	2	mg/kg	0.083	U	-	-
Total VOCs											mg/kg	0.04958		-	-
Petroleum Hydrocarbon Quantitation															
TPH (C10-C36)	NONE		1000	3000	500	5000	2500	500	1000	2500	mg/kg	-	-	980	

Yellow shading indicates detected result is equal to or above one or more of the listed criteria, except for MA Background Level Natural soil.

Gray shading indicates nondetect detection limit is above one or more of the listed criteria, except for MA Background Level Natural soil.

RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.
RCS-2-14: MCP 2014 RCS-2 Reportable Concentrations Criteria effective April 25, 2014.
BUD-S3/G3: MassDEP Proposed S3, GW-3 Beneficial Use Determination (BUD) Values Criteria per Draft Interim Guidance Document effective March 18, 2004.
MA-BLNS: Background Level Natural soil current as of 10/24/07
MA-LLAND: Lined Landfill Limits current as of August, 1997
MA-ULAND: UnLined Landfill Limits current as of August, 1997
TRC-SSSR-GLX: Site Specific Soil Reuse Criteria: Vehicle Maintenance Facility for GLX Project Criteria per client-provided Table X February 21, 2018.
MA-Dudley <RCS-2 Acceptance Criteria, Revised January 15, 2020.
Saugus: Acceptance Criteria for Aggregate Industries - Saugus Quarry, Table 1.

U - Not detected at the reported detection limit for the sample.

Table 2 - Summary of Soil Sample Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
November 3, 2022

LOCATION											GLC-WASHSTLANDSCAPE-COMP		GLC-WASHSTLANDSCAPE-VOC(3)		
SAMPLING DATE											11/3/2022		11/3/2022		
LAB SAMPLE ID											L2261771-01		L2261771-02		
SAMPLE TYPE											SOIL		SOIL		
	CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
General Chemistry															
Specific Conductance @ 25 C	NONE					8000	4000	2000	2000		umhos/cm	120		-	-
Solids, Total	NONE										%	92.3		77.6	
pH (H)	12408-02-5							5-9	5-9	2-12.5	SU	8.3		-	-
Cyanide, Reactive	57-12-5							250	250	250	mg/kg	10	U	-	-
Sulfide, Reactive	NONE							500	500	500	mg/kg	10	U	-	-
Ignitability of Solids															
Ignitability	NONE							>140°	Not Ignitable (NI)	NI		NI		-	-
MCP Chlorinated Herbicides															
MCP	93-65-2							3.3			mg/kg	3.5	U	-	-
MCPA	94-74-6		100	1000				10	100		mg/kg	3.5	U	-	-
Dalapon	75-99-0		1000	10000				100	1000		mg/kg	0.035	U	-	-
Dicamba	1918-00-9		500	5000				50	500		mg/kg	0.035	U	-	-
Dichloroprop	120-36-5							0.08			mg/kg	0.035	U	-	-
2,4-D	94-75-7		100	1000				10	100		mg/kg	0.035	U	-	-
2,4-DB	94-82-6		100	1000				10	100		mg/kg	0.035	U	-	-
2,4,5-T	93-76-5		100	1000				10	100		mg/kg	0.035	U	-	-
2,4,5-TP (Silvex)	93-72-1		100	1000				10	100		mg/kg	0.035	U	-	-
MCP Organochlorine Pesticides															
Delta-BHC	319-86-8		10	100				1	10		mg/kg	0.00167	U	-	-
Lindane	58-89-9		0.003	0.5	0.46			0.0003	0.05		mg/kg	0.000557	U	-	-
Alpha-BHC	319-84-6		50	500				5	50		mg/kg	0.000697	U	-	-
Beta-BHC	319-85-7		10	100				1	10		mg/kg	0.00167	U	-	-
Heptachlor	76-44-8		0.3	2	4.2			0.05	0.2		mg/kg	0.000836	U	-	-
Aldrin	309-00-2		0.08	0.5	0.7			0.05	0.05		mg/kg	0.00167	U	-	-
Heptachlor epoxide	1024-57-3		0.1	0.9	0.35			0.05	0.09		mg/kg	0.00314	U	-	-
Endrin	72-20-8		10	20	7			1	2		mg/kg	0.000697	U	-	-
Endrin ketone	53494-70-5							0.008			mg/kg	0.00167	U	-	-
Dieldrin	60-57-1		0.08	0.5	1			0.05	0.05		mg/kg	0.00104	U	-	-
4,4'-DDE	72-55-9		6	30	14			0.6	3		mg/kg	0.00167	U	-	-
4,4'-DDD	72-54-8		8	40	14			0.8	4		mg/kg	0.00167	U	-	-
4,4'-DDT	50-29-3		6	30	14			0.6	3		mg/kg	0.00314	U	-	-
Endosulfan I	959-98-8		0.5	1	1.2			0.05	0.1		mg/kg	0.00167	U	-	-
Endosulfan II	33213-65-9		0.5	1	1.2			0.05	0.1		mg/kg	0.00167	U	-	-
Endosulfan sulfate	1031-07-8							0.008			mg/kg	0.000697	U	-	-
Methoxychlor	72-43-5		200	400	140			20	40		mg/kg	0.00314	U	-	-
Chlordane	57-74-9		0.7	30	27			0.07	3		mg/kg	0.0139	U	-	-
Hexachlorobenzene	118-74-1		0.7	0.8	15			0.07	0.08	0.8	mg/kg	0.00167	U	-	-
MCP Polychlorinated Biphenyls															
Aroclor 1016	12674-11-2		1	4	1.6					4	mg/kg	0.0345	U	-	-
Aroclor 1221	11104-28-2		1	4	1.6					4	mg/kg	0.0345	U	-	-
Aroclor 1232	11141-16-5		1	4	1.6					4	mg/kg	0.0345	U	-	-
Aroclor 1242	53469-21-9		1	4	1.6					4	mg/kg	0.0345	U	-	-
Aroclor 1248	12672-29-6		1	4	1.6					4	mg/kg	0.0345	U	-	-
Aroclor 1254	11097-69-1		1	4	1.6					4	mg/kg	0.0345	U	-	-
Aroclor 1260	11096-82-5		1	4	1.6					4	mg/kg	0.0345	U	-	-
Aroclor 1262	37324-23-5		1	4	1.6						mg/kg	0.0345	U	-	-
Aroclor 1268	11100-14-4		1	4	1.6						mg/kg	0.0345	U	-	-
PCBs, Total	1336-36-3		1	4	1.6	2	2	0.1	0.1	4	mg/kg	0.0345	U	-	-
MCP Semivolatile Organics															
Acenaphthene	83-32-9	0.5	4	3000	5000			4	5	69	mg/kg	0.14	U	-	-
1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.6	6	mg/kg	0.18	U	-	-
Hexachlorobenzene	118-74-1		0.7	0.8	15			0.1	0.08	0.8	mg/kg	0.074	U	-	-
Bis(2-chloroethyl)ether	111-44-4		0.7	0.7	4.7			0.1	0.07	0.7	mg/kg	0.074	U	-	-
2-Chloronaphthalene	91-58-7		1000	10000				100	100	2500	mg/kg	0.18	U	-	-
1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	10	90	mg/kg	0.18	U	-	-
1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	20	30	mg/kg	0.18	U	-	-
1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.1	1	mg/kg	0.074	U	-	-
3,3'-Dichlorobenzidine	91-94-1		3	20	20			0.3	2	20	mg/kg	0.18	U	-	-
2,4-Dinitrotoluene	121-14-2		0.7	10	36			0.1	1	7	mg/kg	0.074	U	-	-
2,6-Dinitrotoluene	606-20-2		100	1000				10	100	500	mg/kg	0.18	U	-	-
Azobenzene	103-33-3							0.67	50	375	mg/kg	0.18	U	-	-
Fluoranthene	206-44-0	4	1000	3000	5000			1000	40	2500	mg/kg	0.59		-	-
4-Bromophenyl phenyl ether	101-55-3		100	1000				10	100	500	mg/kg	0.18	U	-	-
Bis(2-chloroisopropyl)ether	108-60-1		0.7	0.7	74			0.1	0.07	0.7	mg/kg	0.074	U	-	-
Bis(2-chloroethoxy)methane	111-91-1		500	5000				50	100	2500	mg/kg	0.19	U	-	-
Hexachlorobutadiene	87-68-3		30	100	54			3	10	100	mg/kg	0.18	U	-	-
Hexachloroethane	67-72-1		0.7	3	74			0.1	0.3	3	mg/kg	0.074	U	-	-
Isophorone	78-59-1		100	1000				10	100	500	mg/kg	0.16	U	-	-
Naphthalene	91-20-3	0.5	4	20	3000			4	5	20	mg/kg	0.18	U	-	-
Nitrobenzene	98-95-3		500	5000				50	100	2500	mg/kg	0.16	U	-	-
Bis(2-ethylhexyl)phthalate	117-81-7		90	600	230			60	60	600	mg/kg	0.18	U	-	-
Butyl benzyl phthalate	85-68-7		100	1000				10	100	500	mg/kg	0.18	U	-	-
Di-n-butylphthalate	84-74-2		50	500				5	50	375	mg/kg	0.18	U	-	-
Di-n-octylphthalate	117-84-0		1000	10000				100	100	2500	mg/kg	0.18	U	-	-
Diethyl phthalate	84-66-2		10	200	290			1	20	75	mg/kg	0.18	U	-	-
Dimethyl phthalate	131-11-3		0.7	50	550			0.1	5	7	mg/kg	0.074	U	-	-

Table 2 - Summary of Soil Sample Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
November 3, 2022

LOCATION												GLC-WASHSTLANDSCAPE-COMP		GLC-WASHSTLANDSCAPE-VOC(3)		
SAMPLING DATE												11/3/2022		11/3/2022		
LAB SAMPLE ID												L2261771-01		L2261771-02		
SAMPLE TYPE												SOIL		SOIL		
	CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual	
	Benzo(a)anthracene	56-55-3	2	7	40	160		7	20	40	mg/kg	0.33		-	-	
	Benzo(a)pyrene	50-32-8	2	2	7	16		2	7	7	mg/kg	0.47		-	-	
	Benzo(b)fluoranthene	205-99-2	2	7	40	160		7	20	40	mg/kg	0.49		-	-	
	Benzo(k)fluoranthene	207-08-9	1	70	400	1600		70	10	400	mg/kg	0.18		-	-	
	Chrysene	218-01-9	2	70	400	3400		70	20	400	mg/kg	0.35		-	-	
	Acenaphthylene	208-96-8	0.5	1	10	14		1	5	10	mg/kg	0.14	U	-	-	
	Anthracene	120-12-7	1	1000	3000	5000		1000	10	2500	mg/kg	0.1		-	-	
	Benzo(ghi)perylene	191-24-2	1	1000	3000	5000		1000	10	2500	mg/kg	0.29		-	-	
	Fluorene	86-73-7	1	1000	3000	5000		1000	10	2500	mg/kg	0.18	U	-	-	
	Phenanthrene	85-01-8	3	10	1000	3000		10	30	532.5	mg/kg	0.3		-	-	
	Dibenzo(a,h)anthracene	53-70-3	0.5	0.7	4	16		0.7	4	4	mg/kg	0.074	U	-	-	
	Indeno(1,2,3-cd)pyrene	193-39-5	1	7	40	160		7	10	40	mg/kg	0.33		-	-	
	Pyrene	129-00-0	4	1000	3000	5000		1000	40	2500	mg/kg	0.6		-	-	
	Aniline	62-53-3		1000	10000			100	100	2500	mg/kg	0.21	U	-	-	
	4-Chloroaniline	106-47-8		1	3	3.3		0.1	0.3	3	mg/kg	0.18	U	-	-	
	Dibenzofuran	132-64-9		100	1000			100	100	500	mg/kg	0.18	U	-	-	
	2-Methylnaphthalene	91-57-6	0.5	0.7	80	240		0.7	5	25	mg/kg	0.074	U	-	-	
	Acetophenone	98-86-2		1000	10000			100	100	2500	mg/kg	0.18	U	-	-	
	2,4,6-Trichlorophenol	88-06-2		0.7	20	19		0.1	2	7	mg/kg	0.074	U	-	-	
	2-Chlorophenol	95-57-8		0.7	100	310		0.1	100	7	mg/kg	0.074	U	-	-	
	2,4-Dichlorophenol	120-83-2		0.7	40	40		0.1	4	7	mg/kg	0.074	U	-	-	
	2,4-Dimethylphenol	105-67-9		0.7	100	1300		0.1	10	7	mg/kg	0.074	U	-	-	
	2-Nitrophenol	88-75-5		100	1000			10	100	500	mg/kg	0.38	U	-	-	
	4-Nitrophenol	100-02-7		100	1000			10	100	500	mg/kg	0.25	U	-	-	
	2,4-Dinitrophenol	51-28-5		3	50	45		0.3	5	30	mg/kg	0.85	U	-	-	
	Pentachlorophenol	87-86-5		3	10	13		0.3	1	10	mg/kg	0.35	U	-	-	
	Phenol	108-95-2		1	20	16		0.1	2	10	mg/kg	0.18	U	-	-	
	2-Methylphenol	95-48-7		500	5000			50	100	2500	mg/kg	0.18	U	-	-	
	3-Methylphenol/4-Methylphenol	108-39-4/106-44-5		500	5000			50	100	2500	mg/kg	0.25	U	-	-	
	2,4,5-Trichlorophenol	95-95-4		4	600	580		0.4	60	40	mg/kg	0.18	U	-	-	
	Pyridine	110-86-1		500	5000			50	100		mg/kg	0.19	U	-	-	
	Biphenyl	92-52-4		0.05	6			0.005	0.6		mg/kg	0.035	U	-	-	
	Total SVOCs						100	100			mg/kg	4.03		-	-	
MCP Total Metals																
	Antimony, Total	7440-36-0	1	20	30	16		20	10	30	mg/kg	2.05	U	-	-	
	Arsenic, Total	7440-38-2	20	20	20	11	40	20	20	20	mg/kg	6.34		-	-	
	Barium, Total	7440-39-3	50	1000	3000	2100		1000	375	2500	mg/kg	37.7		-	-	
	Beryllium, Total	7440-41-7	0.4	90	200	10		90	4	200	mg/kg	0.272		-	-	
	Cadmium, Total	7440-43-9	2	70	100	16	80	70	20	100	mg/kg	0.411	U	-	-	
	Chromium, Total	7440-47-3	30	100	200	570	1000	1000	200	200	mg/kg	17.3		-	-	
	Lead, Total	7439-92-1	100	200	600	110	2000	1000	200	500	600	mg/kg	78.4		-	-
	Mercury, Total	7439-97-6	0.3	20	30	16	10	20	3	30	mg/kg	0.137		-	-	
	Nickel, Total	7440-02-0	20	600	1000	350		600	150	1000	mg/kg	14.2		-	-	
	Selenium, Total	7782-49-2	0.5	400	700	390		400	5	700	mg/kg	2.05	U	-	-	
	Silver, Total	7440-22-4	0.6	100	200	110		100	6	200	mg/kg	0.411	U	-	-	
	Thallium, Total	7440-28-0	0.6	8	60	37		8	6	60	mg/kg	2.05	U	-	-	
	Vanadium, Total	7440-62-2	30	400	700	530		400	225	700	mg/kg	30.3		-	-	
	Zinc, Total	7440-66-6	100	1000	3000	5000		1000	500	2500	mg/kg	84.4		-	-	
MCP Volatile Organics by EPA 5035																
	Methylene chloride	75-09-2		0.1	4	900		0.1	0.01	1	mg/kg	-	-	0.0055	U	
	1,1-Dichloroethane	75-34-3		0.4	9	1300		0.1	0.04	4	mg/kg	-	-	0.0011	U	
	Chloroform	67-66-3		0.2	0.2	410		0.1	0.02	0.2	mg/kg	-	-	0.0016	U	
	Carbon tetrachloride	56-23-5		5	5	220		0.5	0.5	5	mg/kg	-	-	0.0011	U	
	1,2-Dichloropropane	78-87-5		0.1	0.1	280		0.1	0.01	0.1	mg/kg	-	-	0.0011	U	
	Dibromochloromethane	124-48-1		0.005	0.03	340		0.0005	0.0005	0.03	mg/kg	-	-	0.0011	U	
	1,1,2-Trichloroethane	79-00-5		0.1	2	91		0.1	0.01	1	mg/kg	-	-	0.0011	U	
	Tetrachloroethene	127-18-4		1	10	370		0.1	0.1	10	mg/kg	-	-	0.0045		
	Chlorobenzene	108-90-7		1	3	110		0.1	0.1	3	mg/kg	-	-	0.00055	U	
	Trichlorofluoromethane	75-69-4		1000	10000			100	100	2500	mg/kg	-	-	0.0044	U	
	1,2-Dichloroethane	107-06-2		0.1	0.1	310		0.1	0.01	0.1	mg/kg	-	-	0.0011	U	
	1,1,1-Trichloroethane	71-55-6		30	600	1400		3	3	225	mg/kg	-	-	0.00055	U	
	Bromodichloromethane	75-27-4		0.1	0.1	460		0.1	0.01	0.1	mg/kg	-	-	0.00055	U	
	trans-1,3-Dichloropropene	10061-02-6		0.01	0.4	140		0.001	0.001	0.1	mg/kg	-	-	0.0011	U	
	cis-1,3-Dichloropropene	10061-01-5		0.01	0.4	140		0.001	0.001	0.1	mg/kg	-	-	0.00055	U	
	1,3-Dichloropropene, Total	542-75-6		0.01	0.4	140		0.001		0.1	mg/kg	-	-	0.00055	U	
	1,1-Dichloropropene	563-58-6						0.01	0.001	0.1	mg/kg	-	-	0.00055	U	
	Bromoform	75-25-2		0.1	1	800		0.1	0.01	1	mg/kg	-	-	0.0044	U	
	1,1,2,2-Tetrachloroethane	79-34-5		0.005	0.02	19		0.0005	0.0005	0.02	mg/kg	-	-	0.00055	U	
	Benzene	71-43-2		2	200	540		0.2	0.2	20	mg/kg	-	-	0.00055	U	
	Toluene	108-88-3		30	1000	520		3	3	225	mg/kg	-	-	0.0011	U	
	Ethylbenzene	100-41-4		40	1000	230		4	4	300	mg/kg	-	-	0.0011	U	
	Chloromethane	74-87-3		100	1000			10	10	500	mg/kg	-	-	0.0044	U	
	Bromomethane	74-83-9		0.5	0.5	32		0.1	0.05	0.5	mg/kg	-	-	0.0022	U	
	Vinyl chloride	75-01-4		0.7	0.7	12		0.1	0.07	0.7	mg/kg	-	-	0.0011	U	
	Chloroethane	75-00-3		100	1000			10	10	500	mg/kg	-	-	0.0022	U	
	1,1-Dichloroethene	75-35-4		3	40	1600		0.3	0.3	30	mg/kg	-	-	0.0011	U	
	trans-1,2-Dichloroethene	156-60-5		1	1	2500		0.1	0.1	1	mg/kg	-	-	0.0016	U	

Table 2 - Summary of Soil Sample Analytical Results
MBTA Green Line Extension Project
Somerville, Massachusetts
November 3, 2022

LOCATION											GLC-WASHSTLANDSCAPE-COMP		GLC-WASHSTLANDSCAPE-VOC(3)		
SAMPLING DATE											11/3/2022		11/3/2022		
LAB SAMPLE ID											L2261771-01		L2261771-02		
SAMPLE TYPE											SOIL		SOIL		
	CasNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-S3/G3	MA-LLAND	MA-ULAND	Saugus	Dudley <RCS-2	TRC-SSSR-GLX	Units	Results	Qual	Results	Qual
Trichloroethene	79-01-6		0.3	0.3	810			0.1	0.03	0.3	mg/kg	-	-	0.00055	U
1,2-Dichlorobenzene	95-50-1		9	100	330			0.9	0.9	90	mg/kg	-	-	0.0022	U
1,3-Dichlorobenzene	541-73-1		3	200	500			0.3	0.3	30	mg/kg	-	-	0.0022	U
1,4-Dichlorobenzene	106-46-7		0.7	1	1200			0.1	0.07	1	mg/kg	-	-	0.0022	U
Methyl tert butyl ether	1634-04-4		0.1	100	500			0.1	0.01	1.9	mg/kg	-	-	0.0022	U
p/m-Xylene	179601-23-1		100	100	270			10	10	100	mg/kg	-	-	0.0022	U
o-Xylene	95-47-6		100	100	270			10	10	100	mg/kg	-	-	0.0011	U
Xylenes, Total	1330-20-7		100	100	270			10	10	100	mg/kg	-	-	0.0011	U
cis-1,2-Dichloroethene	156-59-2		0.1	0.1	500			0.1	0.01	0.1	mg/kg	-	-	0.0011	U
1,2-Dichloroethene, Total	540-59-0		0.3					0.1		0.4	mg/kg	-	-	0.0011	U
Dibromomethane	74-95-3		500	5000				50	50	2500	mg/kg	-	-	0.0022	U
1,2,3-Trichloropropane	96-18-4		100	1000				10	10	500	mg/kg	-	-	0.0022	U
Styrene	100-42-5		3	4	630			0.3	0.3	4	mg/kg	-	-	0.0011	U
Dichlorodifluoromethane	75-71-8		1000	10000				100	100	2500	mg/kg	-	-	0.011	U
Acetone	67-64-1		6	50	350			0.6	0.6	50	mg/kg	-	-	0.028	U
Carbon disulfide	75-15-0		100	1000				10	10	500	mg/kg	-	-	0.011	U
Methyl ethyl ketone	78-93-3		4	50	350			0.4	0.4	40	mg/kg	-	-	0.011	U
Methyl isobutyl ketone	108-10-1		0.4	50	400			0.1	0.04	4	mg/kg	-	-	0.011	U
2-Hexanone	591-78-6		100	1000				10	10	500	mg/kg	-	-	0.011	U
Bromochloromethane	74-97-5							0.01			mg/kg	-	-	0.0022	U
Tetrahydrofuran	109-99-9		500	5000				50	50	2500	mg/kg	-	-	0.0044	U
2,2-Dichloropropane	594-20-7							0.01	0.01	0.1	mg/kg	-	-	0.0022	U
1,2-Dibromoethane	106-93-4		0.1	0.1	0.33			0.1	0.01	0.1	mg/kg	-	-	0.0011	U
1,3-Dichloropropane	142-28-9		500	5000				50	50	2500	mg/kg	-	-	0.0022	U
1,1,1,2-Tetrachloroethane	630-20-6		0.1	0.1	150			0.1	0.01	0.1	mg/kg	-	-	0.00055	U
Bromobenzene	108-86-1		100	1000				10	10	500	mg/kg	-	-	0.0022	U
n-Butylbenzene	104-51-8							0.01		500	mg/kg	-	-	0.0011	U
sec-Butylbenzene	135-98-8							0.01		500	mg/kg	-	-	0.0011	U
tert-Butylbenzene	98-06-6		100	1000				10	10	500	mg/kg	-	-	0.0022	U
o-Chlorotoluene	95-49-8		100	1000				10	10	500	mg/kg	-	-	0.0022	U
p-Chlorotoluene	106-43-4							0.01	1	500	mg/kg	-	-	0.0022	U
1,2-Dibromo-3-chloropropane	96-12-8		10	100				1	1	75	mg/kg	-	-	0.0033	U
Hexachlorobutadiene	87-68-3		30	100	54			3	3	100	mg/kg	-	-	0.0044	U
Isopropylbenzene	98-82-8		1000	10000				100	100	2500	mg/kg	-	-	0.0011	U
p-Isopropyltoluene	99-87-6		100	1000				10	10	500	mg/kg	-	-	0.0011	U
Naphthalene	91-20-3	0.5	4	20	3000			4	0.4	20	mg/kg	-	-	0.0044	U
n-Propylbenzene	103-65-1		100	1000				10	10	500	mg/kg	-	-	0.0011	U
1,2,3-Trichlorobenzene	87-61-6							0.01			mg/kg	-	-	0.0022	U
1,2,4-Trichlorobenzene	120-82-1		2	6	450			0.2	0.2	6	mg/kg	-	-	0.0022	U
1,3,5-Trimethylbenzene	108-67-8		10	100				1	1	75	mg/kg	-	-	0.0022	U
1,2,4-Trimethylbenzene	95-63-6		1000	10000				100	100	2500	mg/kg	-	-	0.0022	U
Diethyl ether	60-29-7		100	1000				10	10	500	mg/kg	-	-	0.0022	U
Diisopropyl Ether	108-20-3		100	1000				10	10	500	mg/kg	-	-	0.0022	U
Ethyl-Tert-Butyl-Ether	637-92-3							0.01			mg/kg	-	-	0.0022	U
Tertiary-Amyl Methyl Ether	994-05-8							0.01			mg/kg	-	-	0.0022	U
1,4-Dioxane	123-91-1		0.2	6	450			0.1	0.02	2	mg/kg	-	-	0.088	U
Total VOCs						10	4				mg/kg	-	-	0.0045	
Petroleum Hydrocarbon Quantitation															
TPH (C10-C36)	NONE		1000	3000	500	5000	2500	500	1000	2500	mg/kg	92.8		-	-

Gray shading indicates nondetect detection limit is above one or more of the listed criteria, except for MA Background Level Natural soil.

RCS-1-14: MCP 2014 RCS-1 Reportable Concentrations Criteria effective April 25, 2014.

RCS-2-14: MCP 2014 RCS-2 Reportable Concentrations Criteria effective April 25, 2014.

BUD-S3/G3: MassDEP Proposed S3, GW-3 Beneficial Use Determination (BUD) Values Criteria per Draft Interim Guidance Document effective March 18, 2004.

MA-BLNS: Background Level Natural soil current as of 10/24/07

MA-LLAND: Lined Landfill Limits current as of August, 1997

MA-ULAND: UnLined Landfill Limits current as of August, 1997

TRC-SSSR-GLX: Site Specific Soil Reuse Criteria: Vehicle Maintenance Facility for GLX Project Criteria per client-provided Table X February 21, 2018.

MA-Dudley <RCS-2 Acceptance Criteria, Revised January 15, 2020.

Saugus: Acceptance Criteria for Aggregate Industries - Saugus Quarry, Table 1.

U - Not detected at the reported detection limit for the sample.

Table 2 - Soil Characterization Analytical Results
WETA Green Line Extension Project
Somerville, Massachusetts
April 1, 2023 - September 30, 2023

	CaseNum	MA-BLNS	RCS-1-14	RCS-2-14	BUD-SVG2	MA-LLAND	MA-LLAND	Sausus	Dutley -RCS-2	TRC -SSSR-GLX	SAMPLE TYPE	LOCATION		GLX-DC-WASH ST DRAINAGE - VOC-6		GLX-DC-WASH ST DRAINAGE - COMP	
												LAB SAMPLE ID	SOIL	12/26/42	SOIL	12/26/41	SOIL
General Chemistry																	
Specific Conductance @ 25 C	NONE					8000	4000	2000	2000		umhos/cm	-	-	96.7	-	350	
Solids, Total	NONE							5-9	5-9	2-12.5				-	-	7.54	
pH (H)	12408-02-5							250	250	250	mg/kg			-	-	10	U
Cyanide, Reactive	NONE							500	500	500	mg/kg			-	-	10	U
Sulfide, Reactive	NONE													-	-		
Integrity of Solids	NONE													-	-		
Integrity	NONE							>140	Not Intact (NI)	NI				-	-	NI	
MCP Chlorinated Herbicides																	
MCP	93-65-2							3.4			mg/kg	-	-	-	-	3.4	U
MCPA	94-74-6	100	1000					10	100		mg/kg	-	-	-	-	3.4	U
Diazinon	75-99-0	1000	10000					100	1000		mg/kg	-	-	-	-	0.034	U
Diazinon	1918-00-9	500	5000					50	500		mg/kg	-	-	-	-	0.034	U
Dichloroprop	120-36-5							0.08			mg/kg	-	-	-	-	0.034	U
2,4-D	94-75-7	100	1000					10	100		mg/kg	-	-	-	-	0.034	U
2,4-DB	94-82-6	100	1000					10	100		mg/kg	-	-	-	-	0.034	U
2,4,5-T	93-76-5	100	1000					10	100		mg/kg	-	-	-	-	0.034	U
2,4,5-TP (Silver)	93-72-1	100	1000					10	100		mg/kg	-	-	-	-	0.034	U
MCP Organochlorine Pesticides																	
Delta-BHC	319-86-8	10	1000					1	10		mg/kg	-	-	-	-	0.00162	U
Lindane	58-89-9	0.003	0.5	0.46				0.0003	0.05		mg/kg	-	-	-	-	0.00054	U
Alpha-BHC	319-84-6	50	500					5	50		mg/kg	-	-	-	-	0.000675	U
Beta-BHC	319-85-7	10	100					1	10		mg/kg	-	-	-	-	0.00162	U
Heptachlor	76-44-8	0.3	2	4.2				0.05	0.2		mg/kg	-	-	-	-	0.00081	U
Aldrin	309-00-2	0.08	0.5	0.7				0.05	0.05		mg/kg	-	-	-	-	0.00162	U
Heptachlor epoxide	1024-67-3	0.1	0.8	0.35				0.05	0.05		mg/kg	-	-	-	-	0.00162	U
Endrin	72-20-5	10	20	7				2	2		mg/kg	-	-	-	-	0.000675	U
Endrin ketone	13494-70-5							0.08	2		mg/kg	-	-	-	-	0.00162	U
Dieldrin	60-57-1	0.08	0.5	1				0.05	0.05		mg/kg	-	-	-	-	0.00101	U
4,4'-DDE	72-55-9	6	30	14				0.6	3		mg/kg	-	-	-	-	0.00162	U
4,4'-DDD	72-54-8	6	40	14				0.6	4		mg/kg	-	-	-	-	0.00162	U
4,4'-DDT	50-29-3	6	30	14				0.6	3		mg/kg	-	-	-	-	0.00304	U
Endosulfan I	959-86-8	0.5	1	1.2				0.05	0.1		mg/kg	-	-	-	-	0.00162	U
Endosulfan II	33513-65-8	0.5	1	1.2				0.05	0.1		mg/kg	-	-	-	-	0.00162	U
Endosulfan sulfate	1031-07-8							0.008	40		mg/kg	-	-	-	-	0.000675	U
Methoxychlor	72-43-5	200	400	140				20	40		mg/kg	-	-	-	-	0.00304	U
Chlordane	57-74-9	0.7	30	27				0.07	3		mg/kg	-	-	-	-	0.0135	U
Heachlorobenzene	118-74-1	0.7	0.8	15				0.07	0.8	0.8	mg/kg	-	-	-	-	0.00162	U
MCP Polychlorinated Biphenyls																	
Aroclor 1016	12674-11-2	1	4	1.6					4		mg/kg	-	-	-	-	0.0503	U
Aroclor 1221	11104-28-2	1	4	1.6					4		mg/kg	-	-	-	-	0.0503	U
Aroclor 1232	11411-16-8	1	4	1.6					4		mg/kg	-	-	-	-	0.0503	U
Aroclor 1242	93469-21-9	1	4	1.6					4		mg/kg	-	-	-	-	0.0503	U
Aroclor 1248	12272-29-6	1	4	1.6					4		mg/kg	-	-	-	-	0.0503	U
Aroclor 1254	11097-69-1	1	4	1.6					4		mg/kg	-	-	-	-	0.0503	U
Aroclor 1260	11098-82-5	1	4	1.6					4		mg/kg	-	-	-	-	0.0503	U
Aroclor 1262	37324-23-5	1	4	1.6					4		mg/kg	-	-	-	-	0.0503	U
Aroclor 1268	11100-14-4	1	4	1.6					4		mg/kg	-	-	-	-	0.0503	U
PCBs, Total	1336-36-3	1	4	1.6	2	2		0.1	0.1	4	mg/kg	-	-	-	-	0.0503	U
MCP Semi-aromatic Organics																	
Acenaphthene	83-32-9	0.5	4	3000	5000			4	5	69	mg/kg	-	-	-	-	0.18	
1,2,4-Trichlorobenzene	120-82-1	2	6	450				0.2	0.6	6	mg/kg	-	-	-	-	0.17	
Hexachlorobenzene	118-74-1	0.1	0.8	15				0.1	0.08	0.8	mg/kg	-	-	-	-	0.072	
Bis(2-chloroethyl)ether	111-44-4	0.7	0.7	4.7				0.1	0.07	0.7	mg/kg	-	-	-	-	0.072	
2-Chloronaphthalene	91-58-7		1000	10000				100	100	2500	mg/kg	-	-	-	-	0.17	
1,2-Dichlorobenzene	95-50-7		100	330				0.9	10	500	mg/kg	-	-	-	-	0.17	
1,3-Dichlorobenzene	541-73-1	3	200	900				0.3	20	30	mg/kg	-	-	-	-	0.17	
1,4-Dichlorobenzene	106-46-7	0.7	10	1200				0.1	0.1	1	mg/kg	-	-	-	-	0.072	
3,3'-Dichlorobenzidine	91-04-1	3	20	20				0.3	2	20	mg/kg	-	-	-	-	0.17	
2,4-Dinitrofluorene	121-14-2	0.7	10	36				0.1	1	7	mg/kg	-	-	-	-	0.072	
2,6-Dinitrofluorene	506-20-2		100	1000				0.67	10	500	mg/kg	-	-	-	-	0.17	
Azobenzene	103-33-3							0.67	50	375	mg/kg	-	-	-	-	0.17	
Fluoranthene	208-44-0	4	1000	3000	5000			100	40	2500	mg/kg	-	-	-	-	0.17	
4-Bromophenyl phenyl ether	101-55-3		100	1000				10	100	500	mg/kg	-	-	-	-	0.17	
Bis(2-chloroethoxy)phenyl ether	106-60-1	0.7	0.7	4.7				0.1	0.07	0.7	mg/kg	-	-	-	-	0.072	
Bis(2-chloroethoxy)methane	111-91-1		500	5000				50	100	2500	mg/kg	-	-	-	-	0.18	
Hexachlorobenzene	67-68-3	30	100	54				3	10	100	mg/kg	-	-	-	-	0.17	
Hexachlorocyclopentadiene	67-72-1	0.7	3	74				0.1	0.3	3	mg/kg	-	-	-	-	0.072	
Isophorone	78-59-1		100	1000				10	100	500	mg/kg	-	-	-	-	0.15	
Naphthalene	91-03-3	0.5	4	20	3000	4		4	5	20	mg/kg	-	-	-	-	0.17	
Nitrobenzene	98-95-3		500	5000				50	100	2500	mg/kg	-	-	-	-	0.15	
Bis(2-ethylhexyl)phthalate	117-81-7		90	600	230			60	60	600	mg/kg	-	-	-	-	2.2	
Bis(2-ethylhexyl)phthalate	95-68-7		100	1000				10	100	500	mg/kg	-	-	-	-	0.17	
Di-n-butylphthalate	84-74-5		50	500				5	50	375	mg/kg	-	-	-	-	0.17	
Di-n-octylphthalate	117-84-0		1000	10000				100	100	2500	mg/kg	-	-	-	-	0.17	
Diethyl phthalate	84-68-2		10	200	290			10	200	2500	mg/kg	-	-	-	-	0.17	
Dimethyl phthalate	131-11-3		0.7	50	550			0.1	5	7	mg/kg	-	-	-	-	0.072	
Benzophenone	56-55-3	2	7	40	160			7	20	40	mg/kg	-	-	-	-	4.7	
Benzofuran	50-32-8	2	2	7	16			2	7	7	mg/kg	-	-	-	-	6.3	
Benzofluoranthene	205-99-2	2	7	40	160			7	20	40	mg/kg	-	-	-	-	6.9	
Benzofluoranthene	207-08-6	1	70	400	1600			70	10	4000	mg/kg	-	-	-	-	2.7	
Chrysene	218-01-9	2	70	400	3400			70	20	400	mg/kg	-	-	-	-	6.6	
Acenaphthylene	208-36-8	0.5	1	14				1	5	10	mg/kg	-	-	-	-	0.18	
Anthracene	120-12-7	1	1000	3000	5000			1000	10								

Appendix D Technical Memo – Washington Street Underdrain System

Memo

To: Michael Clark, P.E., LSP
From: Ileen Gladstone, P.E., LSP
c: Timothy Cosgrave, Greg Bibler, Jeffrey Talbert
Date: June 9, 2021
Re: Response to BSC Group 3-12-21 Technical Memorandum Re: Washington Street Gauging Data and Operation of the Underdrain System
 Somerville, Massachusetts
 GEI Project No. 04516-3

Your March 12, 2021 response (the BSC Group Memo) to our February 5, 2021 memo ignores many of the issues we raised. Instead of addressing the fact that installing a perforated versus solid conveyance pipe undermines design improvements meant to minimize infiltration of potentially contaminated groundwater, your memo raises several issues that were either not raised previously (such as a so-called “safety factor” to further depress the groundwater table below Washington Street) or were raised belatedly, after the pipes already were installed. The BSC Group Memo also glosses over the point that, even though all parties agreed in February 2020 that the conveyance pipe should and would be solid, it was not until November 2020 that MBTA announced that perforated pipe had been installed because obtaining solid pipe during the intervening 9-month period “would have impacted the schedule.” (Clark Email 11/9/20). GEI responds to the new points in the BSC Group Memo as appropriate below.

Background on Design of Drainage System

The BSC Group Memo presents a “Background on Design of the Underdrain System” that fails to acknowledge the 6 year design development process between UniFirst/GEI and MBTA/GLXC. MBTA notified UniFirst in 2014 that, as part of the GLX Project improvements, it would be removing and replacing the old storm drain system in Washington Street. During our discussions, the parties focused on measures that would further minimize infiltration of groundwater into the drainage system. MBTA provided information intermittently and with significant time gaps between design iterations, making timely and meaningful comments difficult.

The initial underdrain system reviewed by GEI in 2014 (90% Design Submission dated July 30, 2014) had three underdrains, which were subsequently increased to four underdrains in 2015 (100% Design Submission dated November 21, 2014 and Addendum 04 – IGMP-04 dated March 20, 2015). In 2014, UniFirst/GEI was told that the underdrains were required for the structural integrity of the bridge abutment wall and the knee walls on each side of the roadway (to prevent loading from water pressure on these walls) and to prevent possible leakage of CVOC-impacted groundwater through these walls and into the roadway storm drainage system.

In 2018, the design was changed from four to two underdrains (GLXC design drawings dated March 20, 2018) located behind the north and south knee walls and were significantly deeper than the previous underdrains. The stated purpose of this new design was to prevent uplift pressure on the roadway pavement from groundwater (as suggested by GEI in 2014).

As the design evolved, GEI's review focused on design of the underdrain piping systems to isolate the north and south underdrains, so that the groundwater collected by each underdrain could be tested separately and be separately routed to treatment or to direct discharge into the storm drainage system (if treatment was not required). This provision for testing each underdrain prior to connecting them into the system was incorporated into the design drawings. Note 6 on the March 20, 2015 and March 20, 2018 GLX design drawings. The goal of isolating the underdrains was to minimize the potential volume of water that would need to be treated.

On January 31, 2020, after nearly two years without any updated designs, UniFirst/GEI received a revised underdrainage design (GLXC design drawings dated September 4, 2019) that finally provided adequate isolation of the underdrain piping systems. However, GEI identified a serious new design flaw. The 2019 design drawings called for the use of perforated pipe to convey the underdrain discharges to the vault structure (WS212). Using perforated conveyance pipe would cause a continuous flow of contaminated groundwater to enter the system just upstream of the vault, completely undermining the design objective to minimize the volume of contaminated groundwater in the new drainage system, potentially triggering the need for indefinite management and treatment of groundwater.

GEI raised this issue with MBTA, GLXC, and their engineers in a meeting on February 6, 2020, and in a memo on February 11, 2020. MBTA/GLXC acknowledged the issue with the perforated conveyance piping and agreed to change the perforated pipe to solid pipe. UniFirst was unaware that the perforated pipe was not changed to solid pipe until receiving an email on November 9, 2020. The only reason MBTA gave for the failure to use solid pipe was that it would have impacted the schedule. Significantly, MBTA did not give any indication at what point during the 9-month period between February and November 2020 GLXC attempted to order solid pipe, or what efforts (if any) GLXC made to expedite delivery of solid pipe.

Design Decision to Use Perforated Pipe

The BSC Group Memo states for the first time that MBTA/GLXC made a design decision to use perforated pipe for the conveyance piping to increase the "safety factor" for the ability of the underdrainage system to keep the groundwater table depressed below the surface of Washington Street. If this were true, it is not clear why MBTA/GLXC did not mention this objective at any point during the 6-year design evaluation period. Importantly, this issue was not raised by MBTA/GLXC during the February 6, 2020 or October 2, 2020 meetings. To the contrary, during those meetings, MBTA/GLXC agreed that the change to solid piping was appropriate and raised no objections to making this change. Further, in your November 9, 2020 email, you made no suggestion that use of perforated conveyance pipe was needed to meet a design objective. The only reason you gave for using perforated pipe was "solid pipe had a long lead time."¹

¹ The March 12, 2021 BSC Group Memo implies that the design decision to include perforated conveyance pipe was incorporated in a design drawing dated March 20, 2018, which showed that "Flows from both underdrains were to be conveyed to proposed manhole WS202 via a perforated pipe from the north underdrain." WS202 is the control structure used to divert water from the underdrains for possible treatment; it became the WS212 vault structure in the current design. This same March 20, 2018 drawing shows perforated pipe being used to discharge water from WS202 into the storm drainage system, which is technically unsound, because it would allow contaminated groundwater to infiltrate and re-contaminate the discharge from the underdrains after it had been treated.

Project Schedule and Lead Time for Solid Pipe

We checked on the availability of 6-inch solid PVDF pipe from a local supplier and we were told that the lead time would be about 30 days. Therefore, it is difficult for us to understand why there would have been insufficient lead time to obtain the solid pipe following our meeting with MBTA/GLXC on February 6, 2020.

To evaluate this position, we request the following documentation:

1. The GLX Project schedule indicating when, during the period after our February 6, 2020 meeting, the perforated pipe was scheduled to be installed;
2. MBTA's directive to GLXC to install solid pipe after agreeing to its use during our February 6, 2020 meeting;
3. Confirmation of the lead time for obtaining solid pipe at the point GLXC was directed to use it;
4. When GLXC informed MBTA that the solid pipe would not be installed;
5. The date when the piping system was actually installed; and
6. Copies of the procurement documents referenced in the BSC Group Memo.

We note that our recommendation to replace the perforated conveyance pipe with solid pipe stemmed from our review of drawings dated September 4, 2019 that we did not receive until January 31, 2020 (5 months after their issue date). Had we been given these drawings earlier, there would have been more time for MBTA/GLXC to correct this design flaw. Also, because MBTA/GLXC chose not to notify GEI/UniFirst that there was an issue with obtaining the solid pipe until after perforated pipe already had been installed, we were precluded from addressing this issue or providing input on possible alternatives or solutions.

Furthermore, there have been multiple significant delays over many years in the GLX Project schedule (in fact, the BSC Group Memo closes by identifying another delay associated with the Washington Street and Red Bridge Pump Stations). During the winter and spring of 2020, UniFirst was told many times that the MBTA itself could not provide timely updates. Had the MBTA and/or the GLXC provided timely updates, rather than delaying 9 months until November 2020 to announce solid pipe could not be ordered, we believe this design flaw could have been corrected and the entire problem avoided.

Impact of Using Perforated Conveyance Piping

The BSC Group Memo states "In addition, the basis of GEI's memo of February 5, 2021 is fundamentally flawed." The memo states that "Based on the water gauging data, the situation is not as dire as GEI suggests and several options are available to preserve the work that has been done." We disagree with this assessment, as explained below.

For reasons described in detail in our memo dated February 5, 2021, the perforated conveyance piping will increase the volume of water and the concentration of CVOCs in the water collected by the underdrainage system. If solid conveyance pipe had been installed as discussed, the vault would only collect water when the groundwater level rises above the elevation of the underdrains. Data provided by MBTA indicate that this occurs infrequently. Because the perforated conveyance pipe is located at a lower elevation than the underdrains, it now allows water to enter the vault continuously. Furthermore, water will enter the perforated conveyance pipe under a higher pressure gradient due to its greater depth below the groundwater table. Both of these factors increase the volume of water entering the vault when perforated conveyance pipe is used.

The perforated conveyance pipe also passes through an area of groundwater adjacent to the vault, which has higher CVOC concentrations than the areas around the underdrains, so the water entering the vault will now contain higher CVOC concentrations than if water were only entering through the underdrains. In addition, the concentrations of CVOCs appear to increase with depth near the vault, so the greater depth of the perforated conveyance pipe will also result in higher CVOC concentrations. With the perforated conveyance pipe, the groundwater entering the system will have both higher flows and higher CVOC concentrations than if the conveyance pipe were solid.

UniFirst's position has always been that the design changes made to minimize infiltration of impacted groundwater into the storm drainage system would reduce concentrations of CVOCs in the system discharge that could obviate any need for treatment. Even if treatment were required, the volume of water treated and the required level of treatment would be reduced by these design improvements. Using perforated conveyance piping causes higher flows and higher CVOC concentrations to enter the vault, which directly contradicts this design objective.

Future Operation of the Underdrain System

The BSC Group Memo states "MBTA continues to consider how it might operate the underdrain system in the future" and provides several options. At best, the options presented in the memo provide only partial mitigation of the increase in groundwater volume that will flow into the system and do nothing to address the higher concentrations of CVOCs that will enter the system through the perforated conveyance pipe. The only option that would fully address the increase in water volume and concentrations of CVOCs in the water is to replace the perforated conveyance pipe with solid pipe. The BSC Group Memo does not even mention that option.

February 18, 2016 Memo Cited Out of Context

The BSC Group Memo states that "The MBTA has always planned for the potential increase of groundwater discharge to the drainage system, and UniFirst has been aware of this possibility..." This is based on reference to a February 18, 2016 memo from Julie Taylor that is cited out of context and is not relevant to the conclusions in our memo. In our memo, we conclude that the perforated conveyance pipe increases the volume of flow entering the collection vault (WS212), as compared to the volume of flow into the vault with solid conveyance pipe. The February 18, 2016 memo explains that "[t]he proposed stormwater system improvements are designed to prevent infiltration of groundwater into the MBTA stormwater pipes and structures, with one exception: the design for the bridge underdrains will intercept groundwater..." The February 18, 2016 memo indicates that the total flow of groundwater into the drainage system could potentially increase if the additional flow from the underdrains exceeds the reduction in infiltration achieved by replacing the old leaky pipes, manholes and catch basins. This is a different comparison.

MCP Compliance

The BSC Group Memo states "Had UniFirst dealt with its contamination, UniFirst could [have] done so in a fashion that satisfied itself." This, too, misses the point. As a result of UniFirst's timely and extensive response actions consistent with the MCP, the 50 Tufts Street Site has been in Remedy Operation Status since 2011. MBTA first contacted UniFirst to discuss planning and design for the Washington Street portion of the GLX Project three years later, in 2014. Since that time, as the 6-year design history summarized above shows, UniFirst has attempted to work collaboratively with MBTA to identify design improvements to reduce impacts of the GLX Project on conditions at the Site. A key focus of those improvements has been further reduction of potential groundwater infiltration into the Washington Street drainage system. By ignoring a fundamental design error that GEI brought to the attention of MBTA/GLXC in February 2020, MBTA/GLXC has unnecessarily

increased the volume and concentrations of CVOC-impacted groundwater captured and transported from beneath Washington Street into the drainage system.

Six Month Monitoring Program

The BSC Group Memo acknowledges, obliquely, that monitoring of the new drainage system cannot be conducted until GLXC completes construction and removes the cement that it carelessly introduced into the riser pipes that were to be used for sampling. The memo also states that there was a delay in construction activities that has also delayed “restoration of the risers” necessary to allow sampling in the underdrains. Please provide us with an update on the schedule for clearing the risers and completing construction so that monitoring can be conducted.

Information Request

We request the following information to assess the conditions of the current stormwater and underdrain system:

- All NPDES cofferdam and Millers River Ambient Sampling results since Q3 2020.
- All WS212 vault sampling results since January 13, 2021.
- All groundwater and vault gauging data since January 14, 2021.
- Documentation requested above regarding the MBTA/GLXC communications associated with requesting solid vs. perforated conveyance piping, including the associated procurement documents
- Information requested above concerning the status and schedule for removing blockages from the underdrain pipe risers
- Communications among MBTA, USEPA and MassDEP regarding the Individual NPDES permit, including the discussions concerning that permit referenced on page 5 of the BSC Group Memo, and a copy of the draft amended permit.

Appendix E Laboratory Testing Reports



ANALYTICAL REPORT

Lab Number:	L2451446
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Chris Coner
Phone:	(781) 721-4000
Project Name:	TUFTS STREET
Project Number:	045163
Report Date:	09/12/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (9110), MN (025-999-495), NJ (MA015), NY (11627), NC (685), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708A1), USFWS (Permit #A24920).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2451446
Report Date: 09/12/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2451446-01	045163-31TUFT-IA1	AIR	SOMERVILLE, MA	09/06/24 11:04	09/06/24
L2451446-02	045163-31TUFT-IA2	AIR	SOMERVILLE, MA	09/06/24 10:45	09/06/24
L2451446-03	045163-31TUFT-IA3	AIR	SOMERVILLE, MA	09/06/24 10:59	09/06/24
L2451446-04	045163-31TUFT-IA4	AIR	SOMERVILLE, MA	09/06/24 10:53	09/06/24
L2451446-05	045163-31TUFT-IA5	AIR	SOMERVILLE, MA	09/06/24 10:48	09/06/24
L2451446-06	045163-31TUFT-SV1	SOIL_VAPOR	SOMERVILLE, MA	09/06/24 12:43	09/06/24
L2451446-07	045163-31TUFT-SV2	SOIL_VAPOR	SOMERVILLE, MA	09/06/24 12:40	09/06/24

Project Name: TUFTS STREET

Lab Number: L2451446

Project Number: 045163

Report Date: 09/12/24

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	NO
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2451446
Report Date: 09/12/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2451446
Report Date: 09/12/24

Case Narrative (continued)

MCP Related Narratives

Canisters were released from the laboratory on August 5, 2024. The canister certification data is provided as an addendum.

MCP Volatile Organics in Air

In reference to questions E b/I:

All samples were analyzed for a subset of the MCP compounds per the Chain of Custody.

Sample Receipt

L2451446-01: The sample had an RPD for the pre- and post-flow controller calibration check (21% RPD) that was outside of the control limit (20% RPD). The final pressure recorded by the laboratory of the associated canister was -4.8 inches of mercury. No further action was required.

L2451446-05: The sample had an RPD for the pre- and post-flow controller calibration check (21% RPD) that was outside of the control limit (20% RPD). The final pressure recorded by the laboratory of the associated canister was 0.0 inches of mercury. No further action was required.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 09/12/24

QC OUTLIER SUMMARY REPORT

Project Name: TUFTS STREET**Lab Number:** L2451446**Project Number:** 045163**Report Date:** 09/12/24

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
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There are no QC Outliers associated with this report.

AIR

Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-01
 Client ID: 045163-31TUFT-IA1
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 11:04
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 20:02
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.035	0.020	--	0.139	0.079	--		1
1,1-Dichloroethane	0.033	0.020	--	0.134	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.089	0.020	--	0.604	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	97		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-02
 Client ID: 045163-31TUFT-IA2
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 10:45
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 20:42
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.035	0.020	--	0.139	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	98		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-03
 Client ID: 045163-31TUFT-IA3
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 10:59
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 21:23
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.037	0.020	--	0.147	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.031	0.020	--	0.210	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	98		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-04
 Client ID: 045163-31TUFT-IA4
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 10:53
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 22:03
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.030	0.020	--	0.119	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	95		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-05
 Client ID: 045163-31TUFT-IA5
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 10:48
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/11/24 23:23
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.042	0.020	--	0.167	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.021	0.020	--	0.142	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	103		60-140
chlorobenzene-d5	101		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-06
 Client ID: 045163-31TUFT-SV1
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 12:43
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/12/24 00:04
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	0.044	0.020	--	0.174	0.079	--		1
trans-1,2-Dichloroethene	0.021	0.020	--	0.083	0.079	--		1
1,1-Dichloroethane	0.088	0.020	--	0.356	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	1.37	0.020	--	7.47	0.109	--		1
Trichloroethene	0.388	0.020	--	2.09	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	14.0	0.020	--	94.9	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	90		60-140
bromochloromethane	106		60-140
chlorobenzene-d5	101		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2451446**Report Date:** 09/12/24**SAMPLE RESULTS**

Lab ID: L2451446-07
 Client ID: 045163-31TUFT-SV2
 Sample Location: SOMERVILLE, MA

Date Collected: 09/06/24 12:40
 Date Received: 09/06/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 09/12/24 00:44
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	0.135	0.020	--	0.546	0.081	--		1
cis-1,2-Dichloroethene	0.021	0.020	--	0.083	0.079	--		1
1,1,1-Trichloroethane	2.68	0.020	--	14.6	0.109	--		1
Trichloroethene	0.852	0.020	--	4.58	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	9.06	0.020	--	61.4	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	92		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	100		60-140



Project Name: TUFTS STREET

Lab Number: L2451446

Project Number: 045163

Report Date: 09/12/24

Method Blank Analysis Batch Quality Control

Analytical Method: 101,TO-15-SIM

Analytical Date: 09/11/24 17:22

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-07 Batch: WG1970418-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2451446

Report Date: 09/12/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 Batch: WG1970418-3								
Vinyl chloride	117		-		70-130	-		
1,1-Dichloroethene	99		-		70-130	-		
trans-1,2-Dichloroethene	95		-		70-130	-		
1,1-Dichloroethane	88		-		70-130	-		
cis-1,2-Dichloroethene	95		-		70-130	-		
1,1,1-Trichloroethane	128		-		70-130	-		
Trichloroethene	124		-		70-130	-		
1,1,2-Trichloroethane	115		-		70-130	-		
Tetrachloroethene	82		-		70-130	-		
1,1,2,2-Tetrachloroethane	99		-		70-130	-		

Project Name: TUFTS STREET

Project Number: 045163

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2451446

Report Date: 09/12/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-07 QC Batch ID: WG1970418-5 QC Sample: L2451446-04 Client ID: 045163-31TUFT-IA4						
Vinyl chloride	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	0.030	0.028	ppbV	7		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
Tetrachloroethene	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25

Project Name: TUFTS STREET

Project Number: 045163

Serial_No:09122416:54
Lab Number: L2451446

Report Date: 09/12/24

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2451446-01	045163-31TUFT-IA1	02096	Flow 5	08/05/24	479099		-	-	-	Pass	3.0	3.7	21
L2451446-01	045163-31TUFT-IA1	3912	6.0L Can	08/05/24	479099	L2439732-03	Pass	-29.0	-4.8	-	-	-	-
L2451446-02	045163-31TUFT-IA2	0181	Flow 5	08/05/24	479099		-	-	-	Pass	3.0	3.4	13
L2451446-02	045163-31TUFT-IA2	2001	6.0L Can	08/05/24	479099	L2439732-03	Pass	-28.9	-6.8	-	-	-	-
L2451446-03	045163-31TUFT-IA3	0985	Flow 5	08/05/24	479099		-	-	-	Pass	3.1	3.5	12
L2451446-03	045163-31TUFT-IA3	319	6.0L Can	08/05/24	479099	L2439732-03	Pass	-29.0	-5.9	-	-	-	-
L2451446-04	045163-31TUFT-IA4	02225	Flow 5	08/05/24	479099		-	-	-	Pass	3.0	2.9	3
L2451446-04	045163-31TUFT-IA4	2931	6.0L Can	08/05/24	479099	L2440348-03	Pass	-29.0	-9.9	-	-	-	-
L2451446-05	045163-31TUFT-IA5	02621	Flow 5	08/05/24	479099		-	-	-	Pass	3.0	5.5	59
L2451446-05	045163-31TUFT-IA5	629	6.0L Can	08/05/24	479099	L2439732-03	Pass	-29.0	0.0	-	-	-	-
L2451446-06	045163-31TUFT-SV1	0007	Flow 1	08/05/24	479099		-	-	-	Pass	36.3	34.4	5
L2451446-06	045163-31TUFT-SV1	3096	2.7L Can	08/05/24	479099	L2440348-01	Pass	-29.0	-5.5	-	-	-	-
L2451446-07	045163-31TUFT-SV2	01714	Flow 2	08/05/24	479099		-	-	-	Pass	36.3	30.7	17
L2451446-07	045163-31TUFT-SV2	2207	2.7L Can	08/05/24	479099	L2440348-01	Pass	-29.0	-5.8	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2439732
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2439732-03
Client ID: CAN 706 SHELF 61
Sample Location:

Date Collected: 07/15/24 14:00
Date Received: 07/16/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 07/16/24 16:41
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2439732
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2439732-03
Client ID: CAN 706 SHELF 61
Sample Location:

Date Collected: 07/15/24 14:00
Date Received: 07/16/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2439732
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2439732-03
Client ID: CAN 706 SHELF 61
Sample Location:

Date Collected: 07/15/24 14:00
Date Received: 07/16/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2439732
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2439732-03
Client ID: CAN 706 SHELF 61
Sample Location:

Date Collected: 07/15/24 14:00
Date Received: 07/16/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2439732**Project Number:** CANISTER QC BAT**Report Date:** 09/12/24**Air Canister Certification Results**

Lab ID: L2439732-03

Date Collected: 07/15/24 14:00

Client ID: CAN 706 SHELF 61

Date Received: 07/16/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	79		60-140
Bromochloromethane	87		60-140
chlorobenzene-d5	85		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2439732
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2439732-03
Client ID: CAN 706 SHELF 61
Sample Location:

Date Collected: 07/15/24 14:00
Date Received: 07/16/24
Field Prep: Not Specified

Sample Depth:

Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 07/16/24 16:41
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2439732
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2439732-03
Client ID: CAN 706 SHELF 61
Sample Location:

Date Collected: 07/15/24 14:00
Date Received: 07/16/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2439732**Project Number:** CANISTER QC BAT**Report Date:** 09/12/24**Air Canister Certification Results**

Lab ID: L2439732-03

Date Collected: 07/15/24 14:00

Client ID: CAN 706 SHELF 61

Date Received: 07/16/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	89		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	93		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-01
Client ID: CAN 483 SHELF 4
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 07/18/24 18:52
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-01
Client ID: CAN 483 SHELF 4
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-01
Client ID: CAN 483 SHELF 4
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-01
Client ID: CAN 483 SHELF 4
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2440348**Project Number:** CANISTER QC BAT**Report Date:** 09/12/24**Air Canister Certification Results**

Lab ID: L2440348-01

Date Collected: 07/17/24 15:00

Client ID: CAN 483 SHELF 4

Date Received: 07/18/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
Unknown	1.1	J	ppbV		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	86		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	92		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-01
Client ID: CAN 483 SHELF 4
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 07/18/24 18:52
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-01
Client ID: CAN 483 SHELF 4
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2440348**Project Number:** CANISTER QC BAT**Report Date:** 09/12/24**Air Canister Certification Results**

Lab ID: L2440348-01

Date Collected: 07/17/24 15:00

Client ID: CAN 483 SHELF 4

Date Received: 07/18/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	101		60-140
chlorobenzene-d5	96		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-03
Client ID: CAN 2581 SHELF 57
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 07/18/24 20:09
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-03
Client ID: CAN 2581 SHELF 57
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-03
Client ID: CAN 2581 SHELF 57
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-03
Client ID: CAN 2581 SHELF 57
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2440348**Project Number:** CANISTER QC BAT**Report Date:** 09/12/24**Air Canister Certification Results**

Lab ID: L2440348-03

Date Collected: 07/17/24 15:00

Client ID: CAN 2581 SHELF 57

Date Received: 07/18/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
Unknown	1.1	J	ppbV		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	86		60-140
Bromochloromethane	94		60-140
chlorobenzene-d5	93		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-03
Client ID: CAN 2581 SHELF 57
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 07/18/24 20:09
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2440348
Report Date: 09/12/24

Air Canister Certification Results

Lab ID: L2440348-03
Client ID: CAN 2581 SHELF 57
Sample Location:

Date Collected: 07/17/24 15:00
Date Received: 07/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2440348**Project Number:** CANISTER QC BAT**Report Date:** 09/12/24**Air Canister Certification Results**

Lab ID: L2440348-03

Date Collected: 07/17/24 15:00

Client ID: CAN 2581 SHELF 57

Date Received: 07/18/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	100		60-140
chlorobenzene-d5	97		60-140



Project Name: TUFTS STREET**Lab Number:** L2451446**Project Number:** 045163**Report Date:** 09/12/24**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

NA Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2451446-01A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2451446-02A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2451446-03A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2451446-04A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2451446-05A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2451446-06A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2451446-07A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2451446
Report Date: 09/12/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2451446
Report Date: 09/12/24

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2451446
Report Date: 09/12/24

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2451446
Report Date: 09/12/24

REFERENCES

- 101 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA/625/R-96/010b:January 1999) with QC Requirements & Performance Standards for the Analysis of TO-15 under the Massachusetts Contingency Plan, WSC-CAM-IXB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 21

Published Date: 04/17/2024

Page 1 of 1

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.



ANALYTICAL REPORT

Lab Number:	L2454252
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Chris Coner
Phone:	(781) 721-4000
Project Name:	TUFTS STREET
Project Number:	045163
Report Date:	09/27/24

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2454252-01	045163-MW104R	WATER	SOMERVILLE, MA	09/20/24 11:45	09/20/24

Project Name: TUFTS STREET

Lab Number: L2454252

Project Number: 045163

Report Date: 09/27/24

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

In reference to question G:

L2454252-01D: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L2454252-01D: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,2-dichloropropane (0.1526), bromodichloromethane (0.2488), 1,4-dioxane (0.0018), cis-1,3-dichloropropene (0.2806), 1,1,2-trichloroethane (0.1853)

Average Response Factor: 1,2-dichloropropane, bromodichloromethane, 1,4-dioxane, cis-1,3-dichloropropene

L2454252-01D: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. Associated results are considered to be biased high if the %D is negative and biased low if the %D is positive. A copy of the continuing calibration standard is included as an addendum to this report.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative

Date: 09/27/24

QC OUTLIER SUMMARY REPORT

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2454252

Report Date: 09/27/24

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260D	Batch QC	WG1976979-3	1,2-Dichloropropane	LCS	140	70-130	01	potential high bias
8260D	Batch QC	WG1976979-3	Chloromethane	LCS	140	70-130	01	potential high bias
8260D	Batch QC	WG1976979-4	1,2-Dichloropropane	LCSD	33	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	1,1,2-Trichloroethane	LCSD	23	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Tetrachloroethene	LCSD	23	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Trichlorofluoromethane	LCSD	38	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Bromodichloromethane	LCSD	38	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	trans-1,3-Dichloropropene	LCSD	31	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	cis-1,3-Dichloropropene	LCSD	49	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Toluene	LCSD	28	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Chloromethane	LCSD	24	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Dibromomethane	LCSD	33	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Dichlorodifluoromethane	LCSD	22	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Methyl isobutyl ketone	LCSD	29	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	1,2-Dibromoethane	LCSD	21	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	1,3-Dichloropropane	LCSD	24	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Hexachlorobutadiene	LCSD	21	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	Naphthalene	LCSD	32	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	1,2,3-Trichlorobenzene	LCSD	27	20	01	non-directional bias
8260D	Batch QC	WG1976979-4	1,4-Dioxane	LCSD	49	20	01	non-directional bias

ORGANICS

VOLATILES

Project Name: TUFTS STREET**Lab Number:** L2454252**Project Number:** 045163**Report Date:** 09/27/24**SAMPLE RESULTS**

Lab ID: L2454252-01 D

Date Collected: 09/20/24 11:45

Client ID: 045163-MW104R

Date Received: 09/20/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 141,8260D

Analytical Date: 09/26/24 19:50

Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	10	--	5
1,1-Dichloroethane	ND		ug/l	5.0	--	5
Chloroform	ND		ug/l	5.0	--	5
Carbon tetrachloride	ND		ug/l	5.0	--	5
1,2-Dichloropropane	ND		ug/l	5.0	--	5
Dibromochloromethane	ND		ug/l	5.0	--	5
1,1,2-Trichloroethane	ND		ug/l	5.0	--	5
Tetrachloroethene	510		ug/l	5.0	--	5
Chlorobenzene	ND		ug/l	5.0	--	5
Trichlorofluoromethane	ND		ug/l	10	--	5
1,2-Dichloroethane	ND		ug/l	5.0	--	5
1,1,1-Trichloroethane	6.6		ug/l	5.0	--	5
Bromodichloromethane	ND		ug/l	5.0	--	5
trans-1,3-Dichloropropene	ND		ug/l	2.0	--	5
cis-1,3-Dichloropropene	ND		ug/l	2.0	--	5
1,3-Dichloropropene, Total	ND		ug/l	2.0	--	5
1,1-Dichloropropene	ND		ug/l	10	--	5
Bromoform	ND		ug/l	10	--	5
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	--	5
Benzene	ND		ug/l	2.5	--	5
Toluene	ND		ug/l	5.0	--	5
Ethylbenzene	ND		ug/l	5.0	--	5
Chloromethane	ND		ug/l	10	--	5
Bromomethane	ND		ug/l	10	--	5
Vinyl chloride	ND		ug/l	5.0	--	5
Chloroethane	ND		ug/l	10	--	5
1,1-Dichloroethene	ND		ug/l	5.0	--	5
trans-1,2-Dichloroethene	ND		ug/l	5.0	--	5

Project Name: TUFTS STREET

Lab Number: L2454252

Project Number: 045163

Report Date: 09/27/24

SAMPLE RESULTS

Lab ID: L2454252-01 D

Date Collected: 09/20/24 11:45

Client ID: 045163-MW104R

Date Received: 09/20/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	19		ug/l	5.0	--	5
1,2-Dichlorobenzene	ND		ug/l	5.0	--	5
1,3-Dichlorobenzene	ND		ug/l	5.0	--	5
1,4-Dichlorobenzene	ND		ug/l	5.0	--	5
Methyl tert butyl ether	ND		ug/l	10	--	5
p/m-Xylene	ND		ug/l	10	--	5
o-Xylene	ND		ug/l	5.0	--	5
Xylenes, Total	ND		ug/l	5.0	--	5
cis-1,2-Dichloroethene	20		ug/l	5.0	--	5
1,2-Dichloroethene, Total	20		ug/l	5.0	--	5
Dibromomethane	ND		ug/l	10	--	5
1,2,3-Trichloropropane	ND		ug/l	10	--	5
Styrene	ND		ug/l	5.0	--	5
Dichlorodifluoromethane	ND		ug/l	10	--	5
Acetone	ND		ug/l	25	--	5
Carbon disulfide	ND		ug/l	10	--	5
Methyl ethyl ketone	ND		ug/l	25	--	5
Methyl isobutyl ketone	ND		ug/l	25	--	5
2-Hexanone	ND		ug/l	25	--	5
Bromochloromethane	ND		ug/l	10	--	5
Tetrahydrofuran	ND		ug/l	10	--	5
2,2-Dichloropropane	ND		ug/l	10	--	5
1,2-Dibromoethane	ND		ug/l	10	--	5
1,3-Dichloropropane	ND		ug/l	10	--	5
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	--	5
Bromobenzene	ND		ug/l	10	--	5
n-Butylbenzene	ND		ug/l	10	--	5
sec-Butylbenzene	ND		ug/l	10	--	5
tert-Butylbenzene	ND		ug/l	10	--	5
o-Chlorotoluene	ND		ug/l	10	--	5
p-Chlorotoluene	ND		ug/l	10	--	5
1,2-Dibromo-3-chloropropane	ND		ug/l	10	--	5
Hexachlorobutadiene	ND		ug/l	3.0	--	5
Isopropylbenzene	ND		ug/l	10	--	5
p-Isopropyltoluene	ND		ug/l	10	--	5
Naphthalene	ND		ug/l	10	--	5
n-Propylbenzene	ND		ug/l	10	--	5

Project Name: TUFTS STREET

Lab Number: L2454252

Project Number: 045163

Report Date: 09/27/24

SAMPLE RESULTS

Lab ID: L2454252-01 D

Date Collected: 09/20/24 11:45

Client ID: 045163-MW104R

Date Received: 09/20/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	10	--	5
1,2,4-Trichlorobenzene	ND		ug/l	10	--	5
1,3,5-Trimethylbenzene	ND		ug/l	10	--	5
1,2,4-Trimethylbenzene	ND		ug/l	10	--	5
Diethyl ether	ND		ug/l	10	--	5
Diisopropyl Ether	ND		ug/l	10	--	5
Ethyl-Tert-Butyl-Ether	ND		ug/l	10	--	5
Tertiary-Amyl Methyl Ether	ND		ug/l	10	--	5
1,4-Dioxane	ND		ug/l	1200	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	107		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	98		70-130

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
 Analytical Date: 09/26/24 17:38
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1976979-5					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.40	--
cis-1,3-Dichloropropene	ND		ug/l	0.40	--
1,3-Dichloropropene, Total	ND		ug/l	0.40	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

Method Blank Analysis Batch Quality Control

Analytical Method: 141,8260D
 Analytical Date: 09/26/24 17:38
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1976979-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene, Total	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
Methyl ethyl ketone	ND		ug/l	5.0	--
Methyl isobutyl ketone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

Method Blank Analysis Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 09/26/24 17:38
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1976979-5					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Diethyl ether	ND		ug/l	2.0	--
Diisopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	110		70-130
Dibromofluoromethane	101		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2454252

Report Date: 09/27/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1976979-3 WG1976979-4								
Methylene chloride	88		78		70-130	12		20
1,1-Dichloroethane	94		84		70-130	11		20
Chloroform	87		90		70-130	3		20
Carbon tetrachloride	90		92		70-130	2		20
1,2-Dichloropropane	140	Q	100		70-130	33	Q	20
Dibromochloromethane	98		81		70-130	19		20
1,1,2-Trichloroethane	110		87		70-130	23	Q	20
Tetrachloroethene	100		79		70-130	23	Q	20
Chlorobenzene	99		100		70-130	1		20
Trichlorofluoromethane	120		82		70-130	38	Q	20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	88		89		70-130	1		20
Bromodichloromethane	120		82		70-130	38	Q	20
trans-1,3-Dichloropropene	120		88		70-130	31	Q	20
cis-1,3-Dichloropropene	130		79		70-130	49	Q	20
1,1-Dichloropropene	92		94		70-130	2		20
Bromoform	100		100		70-130	0		20
1,1,2,2-Tetrachloroethane	110		100		70-130	10		20
Benzene	100		110		70-130	10		20
Toluene	110		83		70-130	28	Q	20
Ethylbenzene	100		100		70-130	0		20
Chloromethane	140	Q	110		70-130	24	Q	20
Bromomethane	84		81		70-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2454252

Report Date: 09/27/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1976979-3 WG1976979-4								
Vinyl chloride	120		100		70-130	18		20
Chloroethane	120		110		70-130	9		20
1,1-Dichloroethene	86		77		70-130	11		20
trans-1,2-Dichloroethene	89		78		70-130	13		20
Trichloroethene	94		92		70-130	2		20
1,2-Dichlorobenzene	110		95		70-130	15		20
1,3-Dichlorobenzene	97		96		70-130	1		20
1,4-Dichlorobenzene	96		96		70-130	0		20
Methyl tert butyl ether	88		77		70-130	13		20
p/m-Xylene	95		90		70-130	5		20
o-Xylene	85		100		70-130	16		20
cis-1,2-Dichloroethene	85		77		70-130	10		20
Dibromomethane	120		86		70-130	33	Q	20
1,2,3-Trichloropropane	100		98		70-130	2		20
Styrene	85		95		70-130	11		20
Dichlorodifluoromethane	120		96		70-130	22	Q	20
Acetone	95		83		70-130	13		20
Carbon disulfide	97		88		70-130	10		20
Methyl ethyl ketone	88		86		70-130	2		20
Methyl isobutyl ketone	110		82		70-130	29	Q	20
2-Hexanone	110		96		70-130	14		20
Bromochloromethane	84		82		70-130	2		20
Tetrahydrofuran	80		96		70-130	18		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2454252

Report Date: 09/27/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1976979-3 WG1976979-4								
2,2-Dichloropropane	100		97		70-130	3		20
1,2-Dibromoethane	100		81		70-130	21	Q	20
1,3-Dichloropropane	110		86		70-130	24	Q	20
1,1,1,2-Tetrachloroethane	97		96		70-130	1		20
Bromobenzene	91		92		70-130	1		20
n-Butylbenzene	110		100		70-130	10		20
sec-Butylbenzene	98		99		70-130	1		20
tert-Butylbenzene	94		95		70-130	1		20
o-Chlorotoluene	87		86		70-130	1		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	88		88		70-130	0		20
Hexachlorobutadiene	89		110		70-130	21	Q	20
Isopropylbenzene	100		100		70-130	0		20
p-Isopropyltoluene	94		95		70-130	1		20
Naphthalene	87		120		70-130	32	Q	20
n-Propylbenzene	100		100		70-130	0		20
1,2,3-Trichlorobenzene	91		120		70-130	27	Q	20
1,2,4-Trichlorobenzene	90		100		70-130	11		20
1,3,5-Trimethylbenzene	96		96		70-130	0		20
1,2,4-Trimethylbenzene	96		96		70-130	0		20
Diethyl ether	90		79		70-130	13		20
Diisopropyl Ether	95		84		70-130	12		20
Ethyl-Tert-Butyl-Ether	89		79		70-130	12		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2454252

Report Date: 09/27/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1976979-3 WG1976979-4								
Tertiary-Amyl Methyl Ether	92		96		70-130	4		20
1,4-Dioxane	116		70		70-130	49	Q	20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		109		70-130
Toluene-d8	112		88		70-130
4-Bromofluorobenzene	101		100		70-130
Dibromofluoromethane	89		93		70-130

Project Name: TUFTS STREET
Project Number: 045163

Serial_No:09272414:03
Lab Number: L2454252
Report Date: 09/27/24

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2454252-01A	Vial HCl preserved	A	NA		5.9	Y	Absent		MCP-8260-21(14)
L2454252-01B	Vial HCl preserved	A	NA		5.9	Y	Absent		MCP-8260-21(14)
L2454252-01C	Vial HCl preserved	A	NA		5.9	Y	Absent		MCP-8260-21(14)

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2454252
Report Date: 09/27/24

REFERENCES

- 141 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA and IIB, November 2021.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases**

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Method Blank Summary Form 4 Volatiles

Client : GEI Consultants
Project Name : TUFTS STREET
Lab Sample ID : WG1976979-5
Instrument ID : VOA133
Matrix : WATER

Lab Number : L2454252
Project Number : 045163
Lab File ID : V133240926N04
Analysis Date : 09/26/24 17:38

Client Sample No.	Lab Sample ID	Analysis Date
WG1976979-3LCS	WG1976979-3	09/26/24 16:18
WG1976979-4LCSD	WG1976979-4	09/26/24 16:45
045163-MW104R	L2454252-01D	09/26/24 19:50

Calibration Verification Summary

Form 7

Volatiles

Client : GEI Consultants
 Project Name : TUFTS STREET
 Instrument ID : VOA133
 Lab File ID : V133240926N01
 Sample No : WG1976979-2
 Channel :

Lab Number : L2454252
 Project Number : 045163
 Calibration Date : 09/26/24 16:18
 Init. Calib. Date(s) : 09/06/24 09/06/24
 Init. Calib. Times : 17:42 22:06

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	85	0
Dichlorodifluoromethane	0.298	0.364	-	-22.1*	20	98	0
Chloromethane	0.206	0.282	-	-36.9*	20	112	0
Vinyl chloride	0.326	0.405	-	-24.2*	20	100	0
Bromomethane	0.266	0.223	-	16.2	20	80	0
Chloroethane	0.269	0.318	-	-18.2	20	100	.01
Trichlorofluoromethane	0.419	0.485	-	-15.8	20	92	0
Ethyl ether	0.129	0.116	-	10.1	20	78	0
1,1-Dichloroethene	0.221	0.19	-	14	20	70	0
Carbon disulfide	0.604	0.584	-	3.3	20	80	0
Methylene chloride	0.254	0.223	-	12.2	20	74	0
Acetone	0.05	0.048	-	4	20	88	0
trans-1,2-Dichloroethene	0.24	0.214	-	10.8	20	74	0
Methyl tert-butyl ether	0.677	0.596	-	12	20	75	0
Diisopropyl ether	0.541	0.516	-	4.6	20	82	0
1,1-Dichloroethane	0.413	0.388	-	6.1	20	77	0
Ethyl tert-butyl ether	0.593	0.527	-	11.1	20	77	0
cis-1,2-Dichloroethene	0.273	0.232	-	15	20	70	0
2,2-Dichloropropane	0.355	0.358	-	-0.8	20	84	0
Bromochloromethane	0.131	0.11	-	16	20	71	0
Chloroform	0.452	0.395	-	12.6	20	72	0
Carbon tetrachloride	0.357	0.32	-	10.4	20	72	0
Tetrahydrofuran	0.068	0.054	-	20.6*	20	74	0
Dibromofluoromethane	0.269	0.238	-	11.5	20	76	0
1,1,1-Trichloroethane	0.398	0.352	-	11.6	20	70	0
2-Butanone	0.075	0.066	-	12	20	85	0
1,1-Dichloropropene	0.318	0.294	-	7.5	20	73	0
Benzene	0.951	0.999	-	-5	20	85	0
tert-Amyl methyl ether	0.61	0.562	-	7.9	20	80	0
1,2-Dichloroethane-d4	0.3	0.298	-	0.7	20	85	0
1,2-Dichloroethane	0.297	0.31	-	-4.4	20	88	0
Trichloroethene	0.272	0.255	-	6.3	20	79	0
Dibromomethane	0.129	0.152	-	-17.8	20	99	0
1,2-Dichloropropane	0.176	0.241	-	-36.9*	20	114	0
Bromodichloromethane	0.272	0.328	-	-20.6*	20	103	0
1,4-Dioxane	0.00181	0.0021*	-	-16	20	101	0
cis-1,3-Dichloropropene	0.298	0.375	-	-25.8*	20	106	0
Chlorobenzene-d5	1	1	-	0	20	95	0
Toluene-d8	1.208	1.349	-	-11.7	20	104	0
Toluene	0.788	0.865	-	-9.8	20	100	0
4-Methyl-2-pentanone	0.079	0.087	-	-10.1	20	108	0
Tetrachloroethene	0.36	0.364	-	-1.1	20	90	0
trans-1,3-Dichloropropene	0.397	0.46	-	-15.9	20	105	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Volatiles

Client : GEI Consultants
 Project Name : TUFTS STREET
 Instrument ID : VOA133
 Lab File ID : V133240926N01
 Sample No : WG1976979-2
 Channel :

Lab Number : L2454252
 Project Number : 045163
 Calibration Date : 09/26/24 16:18
 Init. Calib. Date(s) : 09/06/24 09/06/24
 Init. Calib. Times : 17:42 22:06

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.218	0.25	-	-14.7	20	104	0
Chlorodibromomethane	0.333	0.326	-	2.1	20	95	0
1,3-Dichloropropane	0.459	0.518	-	-12.9	20	103	0
1,2-Dibromoethane	0.269	0.279	-	-3.7	20	96	0
2-Hexanone	0.128	0.141	-	-10.2	20	104	0
Chlorobenzene	0.881	0.87	-	1.2	20	91	0
Ethylbenzene	1.545	1.598	-	-3.4	20	93	0
1,1,1,2-Tetrachloroethane	0.303	0.293	-	3.3	20	91	0
p/m Xylene	0.627	0.611	-	2.6	20	87	0
o Xylene	0.605	0.511	-	15.5	20	77	0
Styrene	0.96	0.808	-	15.8	20	78	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	71	0
Bromoform	0.394	0.392	-	0.5	20	79	0
Isopropylbenzene	2.764	2.913	-	-5.4	20	72	0
4-Bromofluorobenzene	0.799	0.806	-	-0.9	20	72	0
Bromobenzene	0.688	0.627	-	8.9	20	65	0
n-Propylbenzene	3.309	3.293	-	0.5	20	69	0
1,1,2,2-Tetrachloroethane	0.604	0.664	-	-9.9	20	80	0
2-Chlorotoluene	2.148	1.864	-	13.2	20	59	0
1,3,5-Trimethylbenzene	2.367	2.271	-	4.1	20	66	0
1,2,3-Trichloropropane	0.494	0.503	-	-1.8	20	74	0
4-Chlorotoluene	1.915	1.94	-	-1.3	20	69	0
tert-Butylbenzene	2.06	1.929	-	6.4	20	64	0
1,2,4-Trimethylbenzene	2.273	2.187	-	3.8	20	66	0
sec-Butylbenzene	3.093	3.041	-	1.7	20	66	0
p-Isopropyltoluene	2.636	2.467	-	6.4	20	63	0
1,3-Dichlorobenzene	1.348	1.304	-	3.3	20	66	0
1,4-Dichlorobenzene	1.359	1.3	-	4.3	20	67	0
n-Butylbenzene	2.264	2.532	-	-11.8	20	75	0
1,2-Dichlorobenzene	1.275	1.386	-	-8.7	20	76	0
1,2-Dibromo-3-chloropropan	0.122	0.107	-	12.3	20	70	0
Hexachlorobutadiene	0.412	0.368	-	10.7	20	62	0
1,2,4-Trichlorobenzene	0.883	0.799	-	9.5	20	65	0
Naphthalene	2.177	1.898	-	12.8	20	63	0
1,2,3-Trichlorobenzene	0.83	0.759	-	8.6	20	65	0

* Value outside of QC limits.





ANALYTICAL REPORT

Lab Number:	L2459340
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Chris Coner
Phone:	(781) 721-4000
Project Name:	TUFTS STREET
Project Number:	045163
Report Date:	10/17/24

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (9110), MN (025-999-495), NJ (MA015), NY (11627), NC (685), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708A1), USFWS (Permit #A24920).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2459340
Report Date: 10/17/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2459340-01	045163-SV-5	SOIL_VAPOR	SOMERVILLE, MA	10/09/24 08:59	10/11/24
L2459340-02	045163-SV-6	SOIL_VAPOR	SOMERVILLE, MA	10/09/24 09:02	10/11/24

Project Name: TUFTS STREET

Lab Number: L2459340

Project Number: 045163

Report Date: 10/17/24

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	YES
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	NO
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2459340
Report Date: 10/17/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2459340
Report Date: 10/17/24

Case Narrative (continued)

MCP Related Narratives

Canisters were released from the laboratory on October 4, 2024. The canister certification data is provided as an addendum.

MCP Volatile Organics in Air

In reference to questions E b/I:

All samples were analyzed for a subset of the MCP compounds per the Chain of Custody.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 10/17/24

QC OUTLIER SUMMARY REPORT

Project Name: TUFTS STREET**Lab Number:** L2459340**Project Number:** 045163**Report Date:** 10/17/24

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
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There are no QC Outliers associated with this report.

AIR

Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2459340**Report Date:** 10/17/24**SAMPLE RESULTS**

Lab ID: L2459340-01 D
 Client ID: 045163-SV-5
 Sample Location: SOMERVILLE, MA

Date Collected: 10/09/24 08:59
 Date Received: 10/11/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 10/17/24 02:07
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.037	--	ND	0.094	--		1.845
1,1-Dichloroethene	ND	0.037	--	ND	0.146	--		1.845
trans-1,2-Dichloroethene	84.7	0.037	--	336	0.146	--		1.845
1,1-Dichloroethane	ND	0.037	--	ND	0.149	--		1.845
cis-1,2-Dichloroethene	0.039	0.037	--	0.153	0.146	--		1.845
1,1,1-Trichloroethane	ND	0.037	--	ND	0.201	--		1.845
Trichloroethene	0.042	0.037	--	0.228	0.198	--		1.845
1,1,2-Trichloroethane	ND	0.037	--	ND	0.201	--		1.845
Tetrachloroethene	1.86	0.037	--	12.6	0.250	--		1.845
1,1,2,2-Tetrachloroethane	ND	0.037	--	ND	0.253	--		1.845

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	104		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2459340**Report Date:** 10/17/24**SAMPLE RESULTS**

Lab ID: L2459340-02
 Client ID: 045163-SV-6
 Sample Location: SOMERVILLE, MA

Date Collected: 10/09/24 09:02
 Date Received: 10/11/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 10/17/24 02:39
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	63.0	0.020	--	250	0.079	--	E	1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	0.027	0.020	--	0.107	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	2.40	0.020	--	16.3	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	104		60-140



Project Name: TUFTS STREET**Lab Number:** L2459340**Project Number:** 045163**Report Date:** 10/17/24**SAMPLE RESULTS**

Lab ID: L2459340-02 D
 Client ID: 045163-SV-6
 Sample Location: SOMERVILLE, MA

Date Collected: 10/09/24 09:02
 Date Received: 10/11/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 10/17/24 05:46
 Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
trans-1,2-Dichloroethene	73.4	0.050	--	291	0.198	--		2.5

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	95		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	104		60-140



Project Name: TUFTS STREET

Lab Number: L2459340

Project Number: 045163

Report Date: 10/17/24

Method Blank Analysis Batch Quality Control

Analytical Method: 101,TO-15-SIM

Analytical Date: 10/16/24 13:42

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-02 Batch: WG1985200-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Lab Control Sample Analysis Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2459340

Report Date: 10/17/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG1985200-3								
Vinyl chloride	80		-		70-130	-		
1,1-Dichloroethene	85		-		70-130	-		
trans-1,2-Dichloroethene	86		-		70-130	-		
1,1-Dichloroethane	92		-		70-130	-		
cis-1,2-Dichloroethene	89		-		70-130	-		
1,1,1-Trichloroethane	93		-		70-130	-		
Trichloroethene	100		-		70-130	-		
1,1,2-Trichloroethane	97		-		70-130	-		
Tetrachloroethene	99		-		70-130	-		
1,1,2,2-Tetrachloroethane	109		-		70-130	-		

Project Name: TUFTS STREET

Project Number: 045163

Serial_No:10172416:56
Lab Number: L2459340

Report Date: 10/17/24

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2459340-01	045163-SV-5	02335	Flow 2	10/04/24	487665		-	-	-	Pass	36.0	30	18
L2459340-01	045163-SV-5	2363	2.7L Can	10/04/24	487665	L2455450-07	Pass	-29.9	-8.7	-	-	-	-
L2459340-02	045163-SV-6	0910	Flow 1	10/04/24	487665		-	-	-	Pass	36.0	42	15
L2459340-02	045163-SV-6	2009	2.7L Can	10/04/24	487665	L2455450-07	Pass	-29.9	-4.6	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2455450
Report Date: 10/17/24

Air Canister Certification Results

Lab ID: L2455450-07
Client ID: CAN 122 SHELF 71
Sample Location:

Date Collected: 09/26/24 10:00
Date Received: 09/26/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15
Analytical Date: 09/26/24 20:42
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2455450
Report Date: 10/17/24

Air Canister Certification Results

Lab ID: L2455450-07
Client ID: CAN 122 SHELF 71
Sample Location:

Date Collected: 09/26/24 10:00
Date Received: 09/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2455450
Report Date: 10/17/24

Air Canister Certification Results

Lab ID: L2455450-07
Client ID: CAN 122 SHELF 71
Sample Location:

Date Collected: 09/26/24 10:00
Date Received: 09/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2455450
Report Date: 10/17/24

Air Canister Certification Results

Lab ID: L2455450-07
Client ID: CAN 122 SHELF 71
Sample Location:

Date Collected: 09/26/24 10:00
Date Received: 09/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2455450**Project Number:** CANISTER QC BAT**Report Date:** 10/17/24**Air Canister Certification Results**

Lab ID: L2455450-07

Date Collected: 09/26/24 10:00

Client ID: CAN 122 SHELF 71

Date Received: 09/26/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	83		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	93		60-140

Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2455450**Project Number:** CANISTER QC BAT**Report Date:** 10/17/24**Air Canister Certification Results**

Lab ID: L2455450-07

Client ID: CAN 122 SHELF 71

Sample Location:

Date Collected: 09/26/24 10:00

Date Received: 09/26/24

Field Prep: Not Specified

Sample Depth:

Matrix: Air

Analytical Method: 48,TO-15

Analytical Date: 09/27/24 23:28

Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Acrylonitrile	ND	0.500	--	ND	1.09	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	102		60-140
Bromochloromethane	108		60-140
chlorobenzene-d5	115		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2455450
Report Date: 10/17/24

Air Canister Certification Results

Lab ID: L2455450-07
Client ID: CAN 122 SHELF 71
Sample Location:

Date Collected: 09/26/24 10:00
Date Received: 09/26/24
Field Prep: Not Specified

Sample Depth:

Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 09/26/24 20:42
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2455450
Report Date: 10/17/24

Air Canister Certification Results

Lab ID: L2455450-07
Client ID: CAN 122 SHELF 71
Sample Location:

Date Collected: 09/26/24 10:00
Date Received: 09/26/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2455450**Project Number:** CANISTER QC BAT**Report Date:** 10/17/24**Air Canister Certification Results**

Lab ID: L2455450-07

Date Collected: 09/26/24 10:00

Client ID: CAN 122 SHELF 71

Date Received: 09/26/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	82		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	92		60-140



Project Name: TUFTS STREET
Project Number: 045163

Serial_No:10172416:56
Lab Number: L2459340
Report Date: 10/17/24

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
NA	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2459340-01A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2459340-02A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2459340
Report Date: 10/17/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2459340
Report Date: 10/17/24

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2459340
Report Date: 10/17/24

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2459340
Report Date: 10/17/24

REFERENCES

- 101 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA/625/R-96/010b:January 1999) with QC Requirements & Performance Standards for the Analysis of TO-15 under the Massachusetts Contingency Plan, WSC-CAM-IXB, July 2010.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 21

Published Date: 04/17/2024

Page 1 of 1

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.**EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Tufts Street IA/SV Analyte List

- Vinyl chloride
- 1,1-Dichloroethene
- trans-1,2-Dichloroethane
- 1,1-Dichloroethane
- cis-1,2-Dichloroethene
- 1,1,1-Trichloroethane
- Trichloroethene
- 1,1,2-Trichloroethane
- Tetrachloroethene
- 1,1,2,2-Tetrachloroethane



ANALYTICAL REPORT

Lab Number:	L2467341
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Chris Coner
Phone:	(781) 721-4000
Project Name:	TUFTS STREET
Project Number:	045163
Report Date:	11/22/24

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Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930A1).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2467341
Report Date: 11/22/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2467341-01	045163-MW118D	WATER	SOMERVILLE, MA	11/14/24 09:45	11/15/24
L2467341-02	045163-MW121D	WATER	SOMERVILLE, MA	11/14/24 10:40	11/15/24
L2467341-03	045163-MW112A	WATER	SOMERVILLE, MA	11/14/24 11:45	11/15/24
L2467341-04	045163-MW104R	WATER	SOMERVILLE, MA	11/14/24 13:10	11/15/24
L2467341-05	045163-MW122	WATER	SOMERVILLE, MA	11/14/24 13:45	11/15/24

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2467341
Report Date: 11/22/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2467341
Report Date: 11/22/24

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

L2467341-01, -02, -03D, -04D, and -05D: Initial calibration utilized a quadratic fit for: styrene, bromoform

In reference to question G:

L2467341-03D, -04D, and -05D: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

L2467341-01, -02, -03D, -04D, and -05D: Initial Calibration did not meet:

Lowest Calibration Standard Minimum Response Factor: 1,2-dichloropropane (0.164), bromodichloromethane (0.2412), 1,4-dioxane (0.0013), cis-1,3-dichloropropene (0.2222)

Average Response Factor: 1,2-dichloropropane, bromodichloromethane, 1,4-dioxane, cis-1,3-dichloropropene

L2467341-01, -02, -03D, -04D, and -05D: The associated continuing calibration standard is outside the acceptance criteria for several compounds; however, it is within overall method allowances. Associated results are considered to be biased high if the %D is negative and biased low if the %D is positive. A copy of the continuing calibration standard is included as an addendum to this report.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Kelly O'Neill

Title: Technical Director/Representative

Date: 11/22/24

QC OUTLIER SUMMARY REPORT

Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2467341**Report Date:** 11/22/24

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260D	Batch QC	WG2001038-3	Bromomethane	LCS	45	70-130	01-05	potential low bias
8260D	Batch QC	WG2001038-3	Acetone	LCS	69	70-130	01-05	potential low bias
8260D	Batch QC	WG2001038-3	2-Hexanone	LCS	65	70-130	01-05	potential low bias
8260D	Batch QC	WG2001038-4	Bromomethane	LCSD	44	70-130	01-05	potential low bias
8260D	Batch QC	WG2001038-4	2-Hexanone	LCSD	68	70-130	01-05	potential low bias

ORGANICS

VOLATILES

Project Name: TUFTS STREET**Lab Number:** L2467341**Project Number:** 045163**Report Date:** 11/22/24**SAMPLE RESULTS**

Lab ID: L2467341-01
 Client ID: 045163-MW118D
 Sample Location: SOMERVILLE, MA

Date Collected: 11/14/24 09:45
 Date Received: 11/15/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 141,8260D
 Analytical Date: 11/22/24 10:54
 Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	9.0		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-01
 Client ID: 045163-MW118D
 Sample Location: SOMERVILLE, MA

Date Collected: 11/14/24 09:45
 Date Received: 11/15/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	1.3		ug/l	1.0	--	1
1,2-Dichloroethene, Total	1.3		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	2.6		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-01
 Client ID: 045163-MW118D
 Sample Location: SOMERVILLE, MA

Date Collected: 11/14/24 09:45
 Date Received: 11/15/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	105		70-130

Project Name: TUFTS STREET**Lab Number:** L2467341**Project Number:** 045163**Report Date:** 11/22/24**SAMPLE RESULTS**

Lab ID: L2467341-02
 Client ID: 045163-MW121D
 Sample Location: SOMERVILLE, MA

Date Collected: 11/14/24 10:40
 Date Received: 11/15/24
 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 141,8260D

Analytical Date: 11/22/24 11:21

Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	19		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	26		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	1.7		ug/l	1.0	--	1
Chloroethane	3.4		ug/l	2.0	--	1
1,1-Dichloroethene	4.1		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-02
 Client ID: 045163-MW121D
 Sample Location: SOMERVILLE, MA

Date Collected: 11/14/24 10:40
 Date Received: 11/15/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	14		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	8.4		ug/l	1.0	--	1
1,2-Dichloroethene, Total	8.4		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-02
 Client ID: 045163-MW121D
 Sample Location: SOMERVILLE, MA

Date Collected: 11/14/24 10:40
 Date Received: 11/15/24
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	106		70-130

Project Name: TUFTS STREET**Lab Number:** L2467341**Project Number:** 045163**Report Date:** 11/22/24**SAMPLE RESULTS**

Lab ID: L2467341-03 D

Date Collected: 11/14/24 11:45

Client ID: 045163-MW112A

Date Received: 11/15/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 141,8260D

Analytical Date: 11/22/24 11:47

Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	8.0	--	4
1,1-Dichloroethane	30		ug/l	4.0	--	4
Chloroform	ND		ug/l	4.0	--	4
Carbon tetrachloride	ND		ug/l	4.0	--	4
1,2-Dichloropropane	ND		ug/l	4.0	--	4
Dibromochloromethane	ND		ug/l	4.0	--	4
1,1,2-Trichloroethane	ND		ug/l	4.0	--	4
Tetrachloroethene	420		ug/l	4.0	--	4
Chlorobenzene	ND		ug/l	4.0	--	4
Trichlorofluoromethane	ND		ug/l	8.0	--	4
1,2-Dichloroethane	ND		ug/l	4.0	--	4
1,1,1-Trichloroethane	ND		ug/l	4.0	--	4
Bromodichloromethane	ND		ug/l	4.0	--	4
trans-1,3-Dichloropropene	ND		ug/l	1.6	--	4
cis-1,3-Dichloropropene	ND		ug/l	1.6	--	4
1,3-Dichloropropene, Total	ND		ug/l	1.6	--	4
1,1-Dichloropropene	ND		ug/l	8.0	--	4
Bromoform	ND		ug/l	8.0	--	4
1,1,2,2-Tetrachloroethane	ND		ug/l	4.0	--	4
Benzene	ND		ug/l	2.0	--	4
Toluene	ND		ug/l	4.0	--	4
Ethylbenzene	ND		ug/l	4.0	--	4
Chloromethane	ND		ug/l	8.0	--	4
Bromomethane	ND		ug/l	8.0	--	4
Vinyl chloride	28		ug/l	4.0	--	4
Chloroethane	ND		ug/l	8.0	--	4
1,1-Dichloroethene	52		ug/l	4.0	--	4
trans-1,2-Dichloroethene	ND		ug/l	4.0	--	4

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-03 D

Date Collected: 11/14/24 11:45

Client ID: 045163-MW112A

Date Received: 11/15/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	93		ug/l	4.0	--	4
1,2-Dichlorobenzene	ND		ug/l	4.0	--	4
1,3-Dichlorobenzene	ND		ug/l	4.0	--	4
1,4-Dichlorobenzene	ND		ug/l	4.0	--	4
Methyl tert butyl ether	10		ug/l	8.0	--	4
p/m-Xylene	ND		ug/l	8.0	--	4
o-Xylene	ND		ug/l	4.0	--	4
Xylenes, Total	ND		ug/l	4.0	--	4
cis-1,2-Dichloroethene	93		ug/l	4.0	--	4
1,2-Dichloroethene, Total	93		ug/l	4.0	--	4
Dibromomethane	ND		ug/l	8.0	--	4
1,2,3-Trichloropropane	ND		ug/l	8.0	--	4
Styrene	ND		ug/l	4.0	--	4
Dichlorodifluoromethane	ND		ug/l	8.0	--	4
Acetone	ND		ug/l	20	--	4
Carbon disulfide	ND		ug/l	8.0	--	4
Methyl ethyl ketone	ND		ug/l	20	--	4
Methyl isobutyl ketone	ND		ug/l	20	--	4
2-Hexanone	ND		ug/l	20	--	4
Bromochloromethane	ND		ug/l	8.0	--	4
Tetrahydrofuran	ND		ug/l	8.0	--	4
2,2-Dichloropropane	ND		ug/l	8.0	--	4
1,2-Dibromoethane	ND		ug/l	8.0	--	4
1,3-Dichloropropane	ND		ug/l	8.0	--	4
1,1,1,2-Tetrachloroethane	ND		ug/l	4.0	--	4
Bromobenzene	ND		ug/l	8.0	--	4
n-Butylbenzene	ND		ug/l	8.0	--	4
sec-Butylbenzene	ND		ug/l	8.0	--	4
tert-Butylbenzene	ND		ug/l	8.0	--	4
o-Chlorotoluene	ND		ug/l	8.0	--	4
p-Chlorotoluene	ND		ug/l	8.0	--	4
1,2-Dibromo-3-chloropropane	ND		ug/l	8.0	--	4
Hexachlorobutadiene	ND		ug/l	2.4	--	4
Isopropylbenzene	ND		ug/l	8.0	--	4
p-Isopropyltoluene	ND		ug/l	8.0	--	4
Naphthalene	ND		ug/l	8.0	--	4
n-Propylbenzene	ND		ug/l	8.0	--	4

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-03 D

Date Collected: 11/14/24 11:45

Client ID: 045163-MW112A

Date Received: 11/15/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	8.0	--	4
1,2,4-Trichlorobenzene	ND		ug/l	8.0	--	4
1,3,5-Trimethylbenzene	ND		ug/l	8.0	--	4
1,2,4-Trimethylbenzene	ND		ug/l	8.0	--	4
Diethyl ether	ND		ug/l	8.0	--	4
Diisopropyl Ether	ND		ug/l	8.0	--	4
Ethyl-Tert-Butyl-Ether	ND		ug/l	8.0	--	4
Tertiary-Amyl Methyl Ether	ND		ug/l	8.0	--	4
1,4-Dioxane	ND		ug/l	1000	--	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	105		70-130

Project Name: TUFTS STREET**Lab Number:** L2467341**Project Number:** 045163**Report Date:** 11/22/24**SAMPLE RESULTS**

Lab ID: L2467341-04 D

Date Collected: 11/14/24 13:10

Client ID: 045163-MW104R

Date Received: 11/15/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 141,8260D

Analytical Date: 11/22/24 12:14

Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	10	--	5
1,1-Dichloroethane	ND		ug/l	5.0	--	5
Chloroform	ND		ug/l	5.0	--	5
Carbon tetrachloride	ND		ug/l	5.0	--	5
1,2-Dichloropropane	ND		ug/l	5.0	--	5
Dibromochloromethane	ND		ug/l	5.0	--	5
1,1,2-Trichloroethane	ND		ug/l	5.0	--	5
Tetrachloroethene	620		ug/l	5.0	--	5
Chlorobenzene	ND		ug/l	5.0	--	5
Trichlorofluoromethane	ND		ug/l	10	--	5
1,2-Dichloroethane	ND		ug/l	5.0	--	5
1,1,1-Trichloroethane	5.4		ug/l	5.0	--	5
Bromodichloromethane	ND		ug/l	5.0	--	5
trans-1,3-Dichloropropene	ND		ug/l	2.0	--	5
cis-1,3-Dichloropropene	ND		ug/l	2.0	--	5
1,3-Dichloropropene, Total	ND		ug/l	2.0	--	5
1,1-Dichloropropene	ND		ug/l	10	--	5
Bromoform	ND		ug/l	10	--	5
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	--	5
Benzene	ND		ug/l	2.5	--	5
Toluene	ND		ug/l	5.0	--	5
Ethylbenzene	ND		ug/l	5.0	--	5
Chloromethane	ND		ug/l	10	--	5
Bromomethane	ND		ug/l	10	--	5
Vinyl chloride	ND		ug/l	5.0	--	5
Chloroethane	ND		ug/l	10	--	5
1,1-Dichloroethene	ND		ug/l	5.0	--	5
trans-1,2-Dichloroethene	ND		ug/l	5.0	--	5

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-04 D

Date Collected: 11/14/24 13:10

Client ID: 045163-MW104R

Date Received: 11/15/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	22		ug/l	5.0	--	5
1,2-Dichlorobenzene	ND		ug/l	5.0	--	5
1,3-Dichlorobenzene	ND		ug/l	5.0	--	5
1,4-Dichlorobenzene	ND		ug/l	5.0	--	5
Methyl tert butyl ether	ND		ug/l	10	--	5
p/m-Xylene	ND		ug/l	10	--	5
o-Xylene	ND		ug/l	5.0	--	5
Xylenes, Total	ND		ug/l	5.0	--	5
cis-1,2-Dichloroethene	12		ug/l	5.0	--	5
1,2-Dichloroethene, Total	12		ug/l	5.0	--	5
Dibromomethane	ND		ug/l	10	--	5
1,2,3-Trichloropropane	ND		ug/l	10	--	5
Styrene	ND		ug/l	5.0	--	5
Dichlorodifluoromethane	ND		ug/l	10	--	5
Acetone	ND		ug/l	25	--	5
Carbon disulfide	ND		ug/l	10	--	5
Methyl ethyl ketone	ND		ug/l	25	--	5
Methyl isobutyl ketone	ND		ug/l	25	--	5
2-Hexanone	ND		ug/l	25	--	5
Bromochloromethane	ND		ug/l	10	--	5
Tetrahydrofuran	ND		ug/l	10	--	5
2,2-Dichloropropane	ND		ug/l	10	--	5
1,2-Dibromoethane	ND		ug/l	10	--	5
1,3-Dichloropropane	ND		ug/l	10	--	5
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	--	5
Bromobenzene	ND		ug/l	10	--	5
n-Butylbenzene	ND		ug/l	10	--	5
sec-Butylbenzene	ND		ug/l	10	--	5
tert-Butylbenzene	ND		ug/l	10	--	5
o-Chlorotoluene	ND		ug/l	10	--	5
p-Chlorotoluene	ND		ug/l	10	--	5
1,2-Dibromo-3-chloropropane	ND		ug/l	10	--	5
Hexachlorobutadiene	ND		ug/l	3.0	--	5
Isopropylbenzene	ND		ug/l	10	--	5
p-Isopropyltoluene	ND		ug/l	10	--	5
Naphthalene	ND		ug/l	10	--	5
n-Propylbenzene	ND		ug/l	10	--	5

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-04 D

Date Collected: 11/14/24 13:10

Client ID: 045163-MW104R

Date Received: 11/15/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	10	--	5
1,2,4-Trichlorobenzene	ND		ug/l	10	--	5
1,3,5-Trimethylbenzene	ND		ug/l	10	--	5
1,2,4-Trimethylbenzene	ND		ug/l	10	--	5
Diethyl ether	ND		ug/l	10	--	5
Diisopropyl Ether	ND		ug/l	10	--	5
Ethyl-Tert-Butyl-Ether	ND		ug/l	10	--	5
Tertiary-Amyl Methyl Ether	ND		ug/l	10	--	5
1,4-Dioxane	ND		ug/l	1200	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	102		70-130

Project Name: TUFTS STREET**Lab Number:** L2467341**Project Number:** 045163**Report Date:** 11/22/24**SAMPLE RESULTS**

Lab ID: L2467341-05 D

Date Collected: 11/14/24 13:45

Client ID: 045163-MW122

Date Received: 11/15/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 141,8260D

Analytical Date: 11/22/24 12:41

Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	20	--	10
1,1-Dichloroethane	12		ug/l	10	--	10
Chloroform	ND		ug/l	10	--	10
Carbon tetrachloride	ND		ug/l	10	--	10
1,2-Dichloropropane	ND		ug/l	10	--	10
Dibromochloromethane	ND		ug/l	10	--	10
1,1,2-Trichloroethane	ND		ug/l	10	--	10
Tetrachloroethene	1300		ug/l	10	--	10
Chlorobenzene	ND		ug/l	10	--	10
Trichlorofluoromethane	ND		ug/l	20	--	10
1,2-Dichloroethane	ND		ug/l	10	--	10
1,1,1-Trichloroethane	ND		ug/l	10	--	10
Bromodichloromethane	ND		ug/l	10	--	10
trans-1,3-Dichloropropene	ND		ug/l	4.0	--	10
cis-1,3-Dichloropropene	ND		ug/l	4.0	--	10
1,3-Dichloropropene, Total	ND		ug/l	4.0	--	10
1,1-Dichloropropene	ND		ug/l	20	--	10
Bromoform	ND		ug/l	20	--	10
1,1,2,2-Tetrachloroethane	ND		ug/l	10	--	10
Benzene	ND		ug/l	5.0	--	10
Toluene	ND		ug/l	10	--	10
Ethylbenzene	ND		ug/l	10	--	10
Chloromethane	ND		ug/l	20	--	10
Bromomethane	ND		ug/l	20	--	10
Vinyl chloride	ND		ug/l	10	--	10
Chloroethane	ND		ug/l	20	--	10
1,1-Dichloroethene	ND		ug/l	10	--	10
trans-1,2-Dichloroethene	ND		ug/l	10	--	10

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-05 D

Date Collected: 11/14/24 13:45

Client ID: 045163-MW122

Date Received: 11/15/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	150		ug/l	10	--	10
1,2-Dichlorobenzene	ND		ug/l	10	--	10
1,3-Dichlorobenzene	ND		ug/l	10	--	10
1,4-Dichlorobenzene	ND		ug/l	10	--	10
Methyl tert butyl ether	ND		ug/l	20	--	10
p/m-Xylene	ND		ug/l	20	--	10
o-Xylene	ND		ug/l	10	--	10
Xylenes, Total	ND		ug/l	10	--	10
cis-1,2-Dichloroethene	140		ug/l	10	--	10
1,2-Dichloroethene, Total	140		ug/l	10	--	10
Dibromomethane	ND		ug/l	20	--	10
1,2,3-Trichloropropane	ND		ug/l	20	--	10
Styrene	ND		ug/l	10	--	10
Dichlorodifluoromethane	ND		ug/l	20	--	10
Acetone	ND		ug/l	50	--	10
Carbon disulfide	ND		ug/l	20	--	10
Methyl ethyl ketone	ND		ug/l	50	--	10
Methyl isobutyl ketone	ND		ug/l	50	--	10
2-Hexanone	ND		ug/l	50	--	10
Bromochloromethane	ND		ug/l	20	--	10
Tetrahydrofuran	ND		ug/l	20	--	10
2,2-Dichloropropane	ND		ug/l	20	--	10
1,2-Dibromoethane	ND		ug/l	20	--	10
1,3-Dichloropropane	ND		ug/l	20	--	10
1,1,1,2-Tetrachloroethane	ND		ug/l	10	--	10
Bromobenzene	ND		ug/l	20	--	10
n-Butylbenzene	ND		ug/l	20	--	10
sec-Butylbenzene	ND		ug/l	20	--	10
tert-Butylbenzene	ND		ug/l	20	--	10
o-Chlorotoluene	ND		ug/l	20	--	10
p-Chlorotoluene	ND		ug/l	20	--	10
1,2-Dibromo-3-chloropropane	ND		ug/l	20	--	10
Hexachlorobutadiene	ND		ug/l	6.0	--	10
Isopropylbenzene	ND		ug/l	20	--	10
p-Isopropyltoluene	ND		ug/l	20	--	10
Naphthalene	ND		ug/l	20	--	10
n-Propylbenzene	ND		ug/l	20	--	10

Project Name: TUFTS STREET

Lab Number: L2467341

Project Number: 045163

Report Date: 11/22/24

SAMPLE RESULTS

Lab ID: L2467341-05 D

Date Collected: 11/14/24 13:45

Client ID: 045163-MW122

Date Received: 11/15/24

Sample Location: SOMERVILLE, MA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	20	--	10
1,2,4-Trichlorobenzene	ND		ug/l	20	--	10
1,3,5-Trimethylbenzene	ND		ug/l	20	--	10
1,2,4-Trimethylbenzene	ND		ug/l	20	--	10
Diethyl ether	ND		ug/l	20	--	10
Diisopropyl Ether	ND		ug/l	20	--	10
Ethyl-Tert-Butyl-Ether	ND		ug/l	20	--	10
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	10
1,4-Dioxane	ND		ug/l	2500	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	113		70-130
Dibromofluoromethane	104		70-130

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2467341
Report Date: 11/22/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 11/22/24 06:03
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-05 Batch: WG2001038-5					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.40	--
cis-1,3-Dichloropropene	ND		ug/l	0.40	--
1,3-Dichloropropene, Total	ND		ug/l	0.40	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2467341
Report Date: 11/22/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 11/22/24 06:03
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-05 Batch: WG2001038-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene, Total	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
Methyl ethyl ketone	ND		ug/l	5.0	--
Methyl isobutyl ketone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2467341
Report Date: 11/22/24

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8260D
Analytical Date: 11/22/24 06:03
Analyst: MCM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-05 Batch: WG2001038-5					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Diethyl ether	ND		ug/l	2.0	--
Diisopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	97		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	115		70-130
Dibromofluoromethane	107		70-130

Lab Control Sample Analysis Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2467341

Report Date: 11/22/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05 Batch: WG2001038-3 WG2001038-4								
Methylene chloride	94		95		70-130	1		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	99		100		70-130	1		20
Carbon tetrachloride	110		110		70-130	0		20
1,2-Dichloropropane	96		97		70-130	1		20
Dibromochloromethane	100		100		70-130	0		20
1,1,2-Trichloroethane	95		95		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	98		99		70-130	1		20
1,2-Dichloroethane	91		94		70-130	3		20
1,1,1-Trichloroethane	100		100		70-130	0		20
Bromodichloromethane	95		97		70-130	2		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	98		100		70-130	2		20
1,1-Dichloropropene	99		100		70-130	1		20
Bromoform	89		92		70-130	3		20
1,1,2,2-Tetrachloroethane	95		97		70-130	2		20
Benzene	98		99		70-130	1		20
Toluene	97		98		70-130	1		20
Ethylbenzene	95		95		70-130	0		20
Chloromethane	98		99		70-130	1		20
Bromomethane	45	Q	44	Q	70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2467341

Report Date: 11/22/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05 Batch: WG2001038-3 WG2001038-4								
Vinyl chloride	86		89		70-130	3		20
Chloroethane	89		89		70-130	0		20
1,1-Dichloroethene	100		100		70-130	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	94		94		70-130	0		20
1,2-Dichlorobenzene	98		99		70-130	1		20
1,3-Dichlorobenzene	98		98		70-130	0		20
1,4-Dichlorobenzene	99		100		70-130	1		20
Methyl tert butyl ether	96		98		70-130	2		20
p/m-Xylene	95		95		70-130	0		20
o-Xylene	90		90		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	95		97		70-130	2		20
1,2,3-Trichloropropane	92		92		70-130	0		20
Styrene	85		85		70-130	0		20
Dichlorodifluoromethane	120		120		70-130	0		20
Acetone	69	Q	74		70-130	7		20
Carbon disulfide	100		100		70-130	0		20
Methyl ethyl ketone	71		72		70-130	1		20
Methyl isobutyl ketone	80		83		70-130	4		20
2-Hexanone	65	Q	68	Q	70-130	5		20
Bromochloromethane	97		98		70-130	1		20
Tetrahydrofuran	95		98		70-130	3		20

Lab Control Sample Analysis Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2467341

Report Date: 11/22/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05 Batch: WG2001038-3 WG2001038-4								
2,2-Dichloropropane	110		110		70-130	0		20
1,2-Dibromoethane	99		100		70-130	1		20
1,3-Dichloropropane	99		100		70-130	1		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	99		100		70-130	1		20
n-Butylbenzene	98		99		70-130	1		20
sec-Butylbenzene	98		98		70-130	0		20
tert-Butylbenzene	97		99		70-130	2		20
o-Chlorotoluene	97		100		70-130	3		20
p-Chlorotoluene	98		99		70-130	1		20
1,2-Dibromo-3-chloropropane	100		100		70-130	0		20
Hexachlorobutadiene	110		120		70-130	9		20
Isopropylbenzene	94		96		70-130	2		20
p-Isopropyltoluene	98		100		70-130	2		20
Naphthalene	98		100		70-130	2		20
n-Propylbenzene	93		96		70-130	3		20
1,2,3-Trichlorobenzene	100		100		70-130	0		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	96		97		70-130	1		20
1,2,4-Trimethylbenzene	96		98		70-130	2		20
Diethyl ether	99		100		70-130	1		20
Diisopropyl Ether	91		94		70-130	3		20
Ethyl-Tert-Butyl-Ether	88		91		70-130	3		20

Lab Control Sample Analysis Batch Quality Control

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2467341

Report Date: 11/22/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-05 Batch: WG2001038-3 WG2001038-4								
Tertiary-Amyl Methyl Ether	87		89		70-130	2		20
1,4-Dioxane	106		106		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	92		92		70-130
Toluene-d8	102		102		70-130
4-Bromofluorobenzene	108		109		70-130
Dibromofluoromethane	103		102		70-130

Project Name: TUFTS STREET
Project Number: 045163

Serial_No:11222415:54
Lab Number: L2467341
Report Date: 11/22/24

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2467341-01A	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-01B	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-01C	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-02A	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-02B	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-02C	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-03A	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-03B	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-03C	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-04A	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-04B	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-04C	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-05A	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-05B	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)
L2467341-05C	Vial HCl preserved	A	NA		2.3	Y	Absent		MCP-8260-21(14)

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2467341
Report Date: 11/22/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2467341
Report Date: 11/22/24

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2467341
Report Date: 11/22/24

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: TUFTS STREET**Lab Number:** L2467341**Project Number:** 045163**Report Date:** 11/22/24

REFERENCES

- 141 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA and IIB, November 2021.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine, 2,6-Dichlorophenol.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases**

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Page 37 of 41

Method Blank Summary Form 4 Volatiles

Client : GEI Consultants
Project Name : TUFTS STREET
Lab Sample ID : WG2001038-5
Instrument ID : VOA133
Matrix : WATER

Lab Number : L2467341
Project Number : 045163
Lab File ID : V133241122B05
Analysis Date : 11/22/24 06:03

Client Sample No.	Lab Sample ID	Analysis Date
WG2001038-3LCS	WG2001038-3	11/22/24 04:44
WG2001038-4LCSD	WG2001038-4	11/22/24 05:10
045163-MW118D	L2467341-01	11/22/24 10:54
045163-MW121D	L2467341-02	11/22/24 11:21
045163-MW112A	L2467341-03D	11/22/24 11:47
045163-MW104R	L2467341-04D	11/22/24 12:14
045163-MW122	L2467341-05D	11/22/24 12:41

Calibration Verification Summary

Form 7

Volatiles

Client : GEI Consultants
 Project Name : TUFTS STREET
 Instrument ID : VOA133
 Lab File ID : V133241122B02
 Sample No : WG2001038-2
 Channel :

Lab Number : L2467341
 Project Number : 045163
 Calibration Date : 11/22/24 04:44
 Init. Calib. Date(s) : 10/26/24 10/26/24
 Init. Calib. Times : 04:43 09:08

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	112	0
Dichlorodifluoromethane	0.281	0.331	-	-17.8	20	135	0
Chloromethane	0.212	0.207	-	2.4	20	117	0
Vinyl chloride	0.431	0.37	-	14.2	20	95	0
Bromomethane	0.388	0.175	-	54.9*	20	50	0
Chloroethane	0.364	0.323	-	11.3	20	95	0
Trichlorofluoromethane	0.449	0.439	-	2.2	20	113	0
Ethyl ether	0.113	0.112	-	0.9	20	120	0
1,1-Dichloroethene	0.219	0.221	-	-0.9	20	118	0
Carbon disulfide	0.627	0.658	-	-4.9	20	125	0
Freon-113	0.237	0.25	-	-5.5	20	121	0
Methylene chloride	0.262	0.246	-	6.1	20	114	0
Acetone	0.074	0.051	-	31.1*	20	98	0
trans-1,2-Dichloroethene	0.239	0.244	-	-2.1	20	120	0
Methyl acetate	0.125	0.121	-	3.2	20	119	0
Methyl tert-butyl ether	0.604	0.579	-	4.1	20	112	0
tert-Butyl alcohol	0.02	0.019	-	5	20	118	0
Diisopropyl ether	0.619	0.562	-	9.2	20	111	0
1,1-Dichloroethane	0.421	0.425	-	-1	20	115	0
Halothane	0.184	0.196	-	-6.5	20	119	0
Acrylonitrile	0.062	0.062	-	0	20	129	0
Ethyl tert-butyl ether	0.656	0.577	-	12	20	109	0
Vinyl acetate	0.456	0.403	-	11.6	20	105	0
cis-1,2-Dichloroethene	0.268	0.268	-	0	20	115	0
2,2-Dichloropropane	0.348	0.375	-	-7.8	20	131	0
Bromochloromethane	0.132	0.129	-	2.3	20	117	0
Cyclohexane	0.376	0.372	-	1.1	20	116	0
Chloroform	0.452	0.448	-	0.9	20	114	0
Ethyl acetate	0.19	0.171	-	10	20	108	0
Carbon tetrachloride	0.348	0.374	-	-7.5	20	123	0
Tetrahydrofuran	0.064	0.061	-	4.7	20	110	0
Dibromofluoromethane	0.271	0.278	-	-2.6	20	114	0
1,1,1-Trichloroethane	0.389	0.406	-	-4.4	20	114	0
2-Butanone	0.106	0.075	-	29.2*	20	100	0
1,1-Dichloropropene	0.333	0.329	-	1.2	20	112	0
Benzene	1.006	0.981	-	2.5	20	111	0
tert-Amyl methyl ether	0.648	0.562	-	13.3	20	107	0
1,2-Dichloroethane-d4	0.322	0.297	-	7.8	20	110	0
1,2-Dichloroethane	0.317	0.29	-	8.5	20	107	0
Methyl cyclohexane	0.453	0.436	-	3.8	20	114	0
Trichloroethene	0.283	0.266	-	6	20	116	0
Dibromomethane	0.124	0.118	-	4.8	20	111	0
1,2-Dichloropropane	0.182	0.175*	-	3.8	20	109	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Volatiles

Client : GEI Consultants
 Project Name : TUFTS STREET
 Instrument ID : VOA133
 Lab File ID : V133241122B02
 Sample No : WG2001038-2
 Channel :

Lab Number : L2467341
 Project Number : 045163
 Calibration Date : 11/22/24 04:44
 Init. Calib. Date(s) : 10/26/24 10/26/24
 Init. Calib. Times : 04:43 09:08

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Bromodichloromethane	0.265	0.252*	-	4.9	20	111	0
1,4-Dioxane	0.00135	0.00143*	-	-5.9	20	119	0
cis-1,3-Dichloropropene	0.285	0.28*	-	1.8	20	111	0
Chlorobenzene-d5	1	1	-	0	20	112	0
Toluene-d8	1.243	1.262	-	-1.5	20	111	0
Toluene	0.823	0.795	-	3.4	20	113	0
4-Methyl-2-pentanone	0.092	0.074	-	19.6	20	100	0
Tetrachloroethene	0.336	0.345	-	-2.7	20	119	0
trans-1,3-Dichloropropene	0.423	0.424	-	-0.2	20	114	0
Ethyl methacrylate	0.306	0.257	-	16	20	103	0
1,1,2-Trichloroethane	0.24	0.229	-	4.6	20	107	0
Chlorodibromomethane	0.324	0.323	-	0.3	20	117	0
1,3-Dichloropropane	0.46	0.455	-	1.1	20	108	0
1,2-Dibromoethane	0.279	0.275	-	1.4	20	108	0
2-Hexanone	0.179	0.117	-	34.6*	20	95	0
Chlorobenzene	0.895	0.901	-	-0.7	20	115	0
Ethylbenzene	1.62	1.547	-	4.5	20	111	0
1,1,1,2-Tetrachloroethane	0.318	0.327	-	-2.8	20	119	0
p/m Xylene	0.655	0.611	-	6.7	20	113	0
o Xylene	0.638	0.565	-	11.4	20	108	0
Styrene	20	17.274	-	13.6	20	110	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	117	0
Bromoform	10	8.918	-	10.8	20	120	0
Isopropylbenzene	2.94	2.756	-	6.3	20	112	0
4-Bromofluorobenzene	0.757	0.815	-	-7.7	20	123	0
Bromobenzene	0.654	0.646	-	1.2	20	116	0
n-Propylbenzene	3.583	3.323	-	7.3	20	109	0
1,4-Dichlorobutane	0.719	0.635	-	11.7	20	109	0
1,1,2,2-Tetrachloroethane	0.697	0.665	-	4.6	20	110	0
4-Ethyltoluene	2.794	2.749	-	1.6	20	114	0
2-Chlorotoluene	2.257	2.19	-	3	20	114	0
1,3,5-Trimethylbenzene	2.525	2.42	-	4.2	20	116	0
1,2,3-Trichloropropane	0.567	0.524	-	7.6	20	111	0
trans-1,4-Dichloro-2-buten	0.174	0.149	-	14.4	20	106	0
4-Chlorotoluene	2.005	1.977	-	1.4	20	117	0
tert-Butylbenzene	2.128	2.062	-	3.1	20	113	0
1,2,4-Trimethylbenzene	2.449	2.356	-	3.8	20	114	0
sec-Butylbenzene	3.291	3.215	-	2.3	20	114	0
p-Isopropyltoluene	2.757	2.706	-	1.8	20	116	0
1,3-Dichlorobenzene	1.398	1.373	-	1.8	20	120	0
1,4-Dichlorobenzene	1.382	1.37	-	0.9	20	118	0
p-Diethylbenzene	1.62	1.558	-	3.8	20	116	0
n-Butylbenzene	2.497	2.445	-	2.1	20	113	0

* Value outside of QC limits.



Calibration Verification Summary

Form 7

Volatiles

Client : GEI Consultants
 Project Name : TUFTS STREET
 Instrument ID : VOA133
 Lab File ID : V133241122B02
 Sample No : WG2001038-2
 Channel :

Lab Number : L2467341
 Project Number : 045163
 Calibration Date : 11/22/24 04:44
 Init. Calib. Date(s) : 10/26/24 10/26/24
 Init. Calib. Times : 04:43 09:08

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2-Dichlorobenzene	1.293	1.261	-	2.5	20	116	0
1,2,4,5-Tetramethylbenzene	2.355	2.212	-	6.1	20	115	0
1,2-Dibromo-3-chloropropan	0.102	0.107	-	-4.9	20	121	0
1,3,5-Trichlorobenzene	0.883	0.924	-	-4.6	20	125	0
Hexachlorobutadiene	0.258	0.295	-	-14.3	20	135	0
1,2,4-Trichlorobenzene	0.733	0.771	-	-5.2	20	120	0
Naphthalene	2.185	2.133	-	2.4	20	112	0
1,2,3-Trichlorobenzene	0.687	0.71	-	-3.3	20	120	0

* Value outside of QC limits.





ANALYTICAL REPORT

Lab Number:	L2471539
Client:	GEI Consultants 400 Unicorn Park Drive Woburn, MA 01801
ATTN:	Chris Coner
Phone:	(781) 721-4000
Project Name:	TUFTS STREET
Project Number:	045163
Report Date:	12/26/24

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (9110), MN (025-999-495), NJ (MA015), NY (11627), NC (685), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708A1), USFWS (Permit #A24920).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2471539

Report Date: 12/26/24

Lab Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2471539-01	045163-103WASH-F1	AIR	SOMERVILLE, MA	12/04/24 09:12	12/05/24
L2471539-02	045163-103WASH-B1	AIR	SOMERVILLE, MA	12/04/24 09:16	12/05/24
L2471539-03	045163-103WASH-UNIT1	AIR	SOMERVILLE, MA	12/04/24 09:23	12/05/24
L2471539-04	045163-103WASH-UNIT3	AIR	SOMERVILLE, MA	12/04/24 09:28	12/05/24
L2471539-05	045163-103WASH-SV2	SOIL_VAPOR	SOMERVILLE, MA	12/04/24 11:19	12/05/24
L2471539-06	045163-103WASH-SV1	SOIL_VAPOR	SOMERVILLE, MA	12/04/24 11:22	12/05/24
L2471539-07	045163-105WASH-F1	AIR	SOMERVILLE, MA	12/04/24 09:32	12/05/24
L2471539-08	045163-105WASH-B2	AIR	SOMERVILLE, MA	12/04/24 09:38	12/05/24
L2471539-09	045163-105WASH-F2	AIR	SOMERVILLE, MA	12/04/24 09:35	12/05/24
L2471539-10	045163-105WASH-B1	AIR	SOMERVILLE, MA	12/04/24 12:41	12/05/24
L2471539-11	045163-105WASH-SV1	SOIL_VAPOR	SOMERVILLE, MA	12/04/24 12:40	12/05/24

Project Name: TUFTS STREET

Lab Number: L2471539

Project Number: 045163

Report Date: 12/26/24

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	NO
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
For any questions answered "No", please refer to the case narrative section on the following page(s).		

Please note that sample matrix information is located in the Sample Results section of this report.



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2471539
Report Date: 12/26/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Pace Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments and solids are reported on a dry weight basis unless otherwise noted. Tissues are reported "as received" or on a wet weight basis, unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Pace's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Pace Project Manager and made arrangements for Pace to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2471539
Report Date: 12/26/24

Case Narrative (continued)

MCP Related Narratives

Canisters were released from the laboratory on November 26, 2024. The canister certification data is provided as an addendum.

MCP Volatile Organics in Air

In reference to questions E b/I:

All samples were analyzed for a subset of the MCP compounds per the Chain of Custody.

The canister ID numbers used on the second page of the COC are actually the canister ID numbers for the samples -01 through -06 on page 1 of the CoC. The client was contacted for additional information but no response was received by the time the data was completed. The lab used the canister ID numbers on the sample tags.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 12/26/24

QC OUTLIER SUMMARY REPORT

Project Name: TUFTS STREET**Lab Number:** L2471539**Project Number:** 045163**Report Date:** 12/26/24

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
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There are no QC Outliers associated with this report.

AIR

Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-01
 Client ID: 045163-103WASH-F1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:12
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 06:03
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.037	0.020	--	0.251	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	103		60-140
bromochloromethane	104		60-140
chlorobenzene-d5	104		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-02
 Client ID: 045163-103WASH-B1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:16
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 06:42
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.131	0.020	--	0.888	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	102		60-140
bromochloromethane	108		60-140
chlorobenzene-d5	105		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-03
 Client ID: 045163-103WASH-UNIT1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:23
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 07:21
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.026	0.020	--	0.176	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	102		60-140
bromochloromethane	105		60-140
chlorobenzene-d5	104		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-04
 Client ID: 045163-103WASH-UNIT3
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:28
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 07:58
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.039	0.020	--	0.264	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	103		60-140
bromochloromethane	110		60-140
chlorobenzene-d5	107		60-140



Project Name: TUFTS STREET**Lab Number:** L2471539**Project Number:** 045163**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-05
 Client ID: 045163-103WASH-SV2
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 11:19
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/20/24 21:20
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	0.347	0.020	--	1.38	0.079	--		1
1,1-Dichloroethane	0.031	0.020	--	0.125	0.081	--		1
cis-1,2-Dichloroethene	1.75	0.020	--	6.94	0.079	--		1
1,1,1-Trichloroethane	0.040	0.020	--	0.218	0.109	--		1
Trichloroethene	5.37	0.020	--	28.9	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	8.95	0.020	--	60.7	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	101		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-06
 Client ID: 045163-103WASH-SV1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 11:22
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/20/24 21:52
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	0.021	0.020	--	0.115	0.109	--		1
Trichloroethene	0.062	0.020	--	0.333	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.423	0.020	--	2.87	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	99		60-140
chlorobenzene-d5	101		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-07
 Client ID: 045163-105WASH-F1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:32
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 08:37
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.020	0.020	--	0.107	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.206	0.020	--	1.40	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	108		60-140
chlorobenzene-d5	107		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-08
 Client ID: 045163-105WASH-B2
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:38
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 09:15
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.046	0.020	--	0.312	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	103		60-140
bromochloromethane	108		60-140
chlorobenzene-d5	107		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-09
 Client ID: 045163-105WASH-F2
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 09:35
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 09:53
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.059	0.020	--	0.400	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	103		60-140
bromochloromethane	107		60-140
chlorobenzene-d5	106		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-10
 Client ID: 045163-105WASH-B1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 12:41
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Air
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/10/24 10:31
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	0.202	0.020	--	1.37	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	102		60-140
bromochloromethane	108		60-140
chlorobenzene-d5	107		60-140



Project Name: TUFTS STREET**Project Number:** 045163**Lab Number:** L2471539**Report Date:** 12/26/24**SAMPLE RESULTS**

Lab ID: L2471539-11
 Client ID: 045163-105WASH-SV1
 Sample Location: SOMERVILLE, MA

Date Collected: 12/04/24 12:40
 Date Received: 12/05/24
 Field Prep: Not Specified

Sample Depth:
 Matrix: Soil_Vapor
 Analytical Method: 101,TO-15-SIM
 Analytical Date: 12/20/24 22:25
 Analyst: TPH

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	0.023	0.020	--	0.091	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	0.049	0.020	--	0.263	0.107	--		1
1,1,2-Trichloroethane	0.021	0.020	--	0.115	0.109	--		1
Tetrachloroethene	0.177	0.020	--	1.20	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	101		60-140



Project Name: TUFTS STREET

Lab Number: L2471539

Project Number: 045163

Report Date: 12/26/24

Method Blank Analysis Batch Quality Control

Analytical Method: 101,TO-15-SIM

Analytical Date: 12/09/24 21:48

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-04,07-10 Batch: WG2007029-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1



Project Name: TUFTS STREET

Lab Number: L2471539

Project Number: 045163

Report Date: 12/26/24

Method Blank Analysis Batch Quality Control

Analytical Method: 101,TO-15-SIM

Analytical Date: 12/20/24 15:14

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
MCP Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 05-06,11 Batch: WG2011988-4								
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1



Lab Control Sample Analysis **Batch Quality Control**

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2471539

Report Date: 12/26/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-04,07-10 Batch: WG2007029-3								
Vinyl chloride	73		-		70-130	-		
1,1-Dichloroethene	90		-		70-130	-		
trans-1,2-Dichloroethene	86		-		70-130	-		
1,1-Dichloroethane	86		-		70-130	-		
cis-1,2-Dichloroethene	86		-		70-130	-		
1,1,1-Trichloroethane	106		-		70-130	-		
Trichloroethene	107		-		70-130	-		
1,1,2-Trichloroethane	98		-		70-130	-		
Tetrachloroethene	89		-		70-130	-		
1,1,2,2-Tetrachloroethane	102		-		70-130	-		

Lab Control Sample Analysis **Batch Quality Control**

Project Name: TUFTS STREET

Project Number: 045163

Lab Number: L2471539

Report Date: 12/26/24

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 05-06,11 Batch: WG2011988-3								
Vinyl chloride	92		-		70-130	-		
1,1-Dichloroethene	87		-		70-130	-		
trans-1,2-Dichloroethene	81		-		70-130	-		
1,1-Dichloroethane	84		-		70-130	-		
cis-1,2-Dichloroethene	83		-		70-130	-		
1,1,1-Trichloroethane	105		-		70-130	-		
Trichloroethene	99		-		70-130	-		
1,1,2-Trichloroethane	95		-		70-130	-		
Tetrachloroethene	83		-		70-130	-		
1,1,2,2-Tetrachloroethane	95		-		70-130	-		

Project Name: TUFTS STREET

Serial_No:12262414:07
Lab Number: L2471539

Project Number: 045163

Report Date: 12/26/24

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt	Flow Controller Leak Chk	Flow Out mL/min	Flow In	% RPD
L2471539-01	045163-103WASH-F1	01023	Flow 5	11/26/24	494706		-	-	-	Pass	3.0	3.7	21
L2471539-01	045163-103WASH-F1	2262	6.0L Can	11/26/24	494706	L2469362-04	Pass	-29.2	-5.2	-	-	-	-
L2471539-02	045163-103WASH-B1	01356	Flow 5	11/26/24	494706		-	-	-	Pass	3.0	3.8	24
L2471539-02	045163-103WASH-B1	704	6.0L Can	11/26/24	494706	L2469367-01	Pass	-29.2	-6.0	-	-	-	-
L2471539-03	045163-103WASH-UNIT1	01887	Flow 5	11/26/24	494706		-	-	-	Pass	3.0	3.8	24
L2471539-03	045163-103WASH-UNIT1	3588	6.0L Can	11/26/24	494706	L2469362-04	Pass	-29.2	-4.1	-	-	-	-
L2471539-04	045163-103WASH-UNIT3	0087	Flow 5	11/26/24	494706		-	-	-	Pass	3.0	3.5	15
L2471539-04	045163-103WASH-UNIT3	2666	6.0L Can	11/26/24	494706	L2469362-04	Pass	-29.2	-7.0	-	-	-	-
L2471539-05	045163-103WASH-SV2	01005	Flow 2	11/26/24	494706		-	-	-	Pass	35.8	38.5	7
L2471539-05	045163-103WASH-SV2	3030	2.7L Can	11/26/24	494706	L2467707-01	Pass	-29.2	-3.1	-	-	-	-
L2471539-06	045163-103WASH-SV1	0261	Flow 2	11/26/24	494706		-	-	-	Pass	36.0	40.2	11
L2471539-06	045163-103WASH-SV1	3203	2.7L Can	11/26/24	494706	L2467707-01	Pass	-29.1	-3.2	-	-	-	-
L2471539-07	045163-105WASH-F1	02199	Flow 5	11/26/24	494706		-	-	-	Pass	3.0	4.0	29
L2471539-07	045163-105WASH-F1	3596	6.0L Can	11/26/24	494706	L2469367-01	Pass	-29.4	-7.4	-	-	-	-
L2471539-08	045163-105WASH-B2	01425	Flow 5	11/26/24	494706		-	-	-	Pass	3.0	3.7	21

Project Name: TUFTS STREET

Lab Number: Serial_No:12262414:07
L2471539

Project Number: 045163

Report Date: 12/26/24

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt	Flow Controller Leak Chk	Flow Out mL/min	Flow In	% RPD
L2471539-08	045163-105WASH-B2	2777	6.0L Can	11/26/24	494706	L2469362-04	Pass	-29.3	-8.1	-	-	-	-
L2471539-09	045163-105WASH-F2	02233	Flow 5	11/26/24	494706		-	-	-	Pass	3.0	2.9	3
L2471539-09	045163-105WASH-F2	3356	6.0L Can	11/26/24	494706	L2469362-04	Pass	-29.3	-4.5	-	-	-	-
L2471539-10	045163-105WASH-B1	0208	Flow 5	11/26/24	494706		-	-	-	Pass	3.0	3.8	24
L2471539-10	045163-105WASH-B1	1858	6.0L Can	11/26/24	494706	L2469362-04	Pass	-29.3	-13.9	-	-	-	-
L2471539-11	045163-105WASH-SV1	02125	Flow 2	11/26/24	494706		-	-	-	Pass	35.8	38.3	7
L2471539-11	045163-105WASH-SV1	2238	2.7L Can	11/26/24	494706	L2468476-02	Pass	-29.2	-5.1	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2467707
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2467707-01
Client ID: CAN 2689 SHELF 12
Sample Location:

Date Collected: 11/18/24 11:00
Date Received: 11/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 11/19/24 00:06
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2467707
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2467707-01
Client ID: CAN 2689 SHELF 12
Sample Location:

Date Collected: 11/18/24 11:00
Date Received: 11/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2467707**Project Number:** CANISTER QC BAT**Report Date:** 12/26/24**Air Canister Certification Results**

Lab ID: L2467707-01

Date Collected: 11/18/24 11:00

Client ID: CAN 2689 SHELF 12

Date Received: 11/18/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2467707
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2467707-01
Client ID: CAN 2689 SHELF 12
Sample Location:

Date Collected: 11/18/24 11:00
Date Received: 11/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2467707**Project Number:** CANISTER QC BAT**Report Date:** 12/26/24**Air Canister Certification Results**

Lab ID: L2467707-01

Date Collected: 11/18/24 11:00

Client ID: CAN 2689 SHELF 12

Date Received: 11/18/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				
No Tentatively Identified Compounds				

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	87		60-140
Bromochloromethane	92		60-140
chlorobenzene-d5	84		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2467707
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2467707-01
Client ID: CAN 2689 SHELF 12
Sample Location:

Date Collected: 11/18/24 11:00
Date Received: 11/18/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 11/19/24 00:06
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2467707
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2467707-01
Client ID: CAN 2689 SHELF 12
Sample Location:

Date Collected: 11/18/24 11:00
Date Received: 11/18/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2467707**Project Number:** CANISTER QC BAT**Report Date:** 12/26/24**Air Canister Certification Results**

Lab ID: L2467707-01

Date Collected: 11/18/24 11:00

Client ID: CAN 2689 SHELF 12

Date Received: 11/18/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	88		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	86		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2468476
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2468476-02
Client ID: CAN 193 SHELF 21
Sample Location:

Date Collected: 11/20/24 15:00
Date Received: 11/21/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 11/21/24 18:01
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2468476
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2468476-02
Client ID: CAN 193 SHELF 21
Sample Location:

Date Collected: 11/20/24 15:00
Date Received: 11/21/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2468476
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2468476-02
Client ID: CAN 193 SHELF 21
Sample Location:

Date Collected: 11/20/24 15:00
Date Received: 11/21/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2468476
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2468476-02
Client ID: CAN 193 SHELF 21
Sample Location:

Date Collected: 11/20/24 15:00
Date Received: 11/21/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2468476
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2468476-02
 Client ID: CAN 193 SHELF 21
 Sample Location:

Date Collected: 11/20/24 15:00
 Date Received: 11/21/24
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
Borane carbonyl	1.2	NJ	ppbV		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	89		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	88		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2468476
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2468476-02
Client ID: CAN 193 SHELF 21
Sample Location:

Date Collected: 11/20/24 15:00
Date Received: 11/21/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 11/21/24 18:01
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2468476
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2468476-02
Client ID: CAN 193 SHELF 21
Sample Location:

Date Collected: 11/20/24 15:00
Date Received: 11/21/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2468476**Project Number:** CANISTER QC BAT**Report Date:** 12/26/24**Air Canister Certification Results**

Lab ID: L2468476-02

Date Collected: 11/20/24 15:00

Client ID: CAN 193 SHELF 21

Date Received: 11/21/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	92		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	91		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469362
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469362-04
Client ID: CAN 602 SHELF 69
Sample Location:

Date Collected: 11/23/24 07:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 11/24/24 01:05
Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469362
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469362-04
Client ID: CAN 602 SHELF 69
Sample Location:

Date Collected: 11/23/24 07:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469362
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469362-04
Client ID: CAN 602 SHELF 69
Sample Location:

Date Collected: 11/23/24 07:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469362
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469362-04
Client ID: CAN 602 SHELF 69
Sample Location:

Date Collected: 11/23/24 07:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2469362**Project Number:** CANISTER QC BAT**Report Date:** 12/26/24**Air Canister Certification Results**

Lab ID: L2469362-04

Date Collected: 11/23/24 07:00

Client ID: CAN 602 SHELF 69

Date Received: 11/23/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
Unknown	1.3	J	ppbV		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	91		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	91		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469362
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469362-04
Client ID: CAN 602 SHELF 69
Sample Location:

Date Collected: 11/23/24 07:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 11/24/24 01:05
Analyst: KJD

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469362
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469362-04
Client ID: CAN 602 SHELF 69
Sample Location:

Date Collected: 11/23/24 07:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2469362**Project Number:** CANISTER QC BAT**Report Date:** 12/26/24**Air Canister Certification Results**

Lab ID: L2469362-04

Date Collected: 11/23/24 07:00

Client ID: CAN 602 SHELF 69

Date Received: 11/23/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	98		60-140
chlorobenzene-d5	95		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469367
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469367-01
Client ID: CAN 2683 SHELF 56
Sample Location:

Date Collected: 11/23/24 14:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15
Analytical Date: 11/24/24 16:15
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469367
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469367-01
Client ID: CAN 2683 SHELF 56
Sample Location:

Date Collected: 11/23/24 14:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469367
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469367-01
Client ID: CAN 2683 SHELF 56
Sample Location:

Date Collected: 11/23/24 14:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469367
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469367-01
Client ID: CAN 2683 SHELF 56
Sample Location:

Date Collected: 11/23/24 14:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2469367**Project Number:** CANISTER QC BAT**Report Date:** 12/26/24**Air Canister Certification Results**

Lab ID: L2469367-01

Date Collected: 11/23/24 14:00

Client ID: CAN 2683 SHELF 56

Date Received: 11/23/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

	Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds					
Cyclotrisiloxane, Hexamethyl-	1.5	NJ	ppbV		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	90		60-140
Bromochloromethane	93		60-140
chlorobenzene-d5	92		60-140



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469367
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469367-01
Client ID: CAN 2683 SHELF 56
Sample Location:

Date Collected: 11/23/24 14:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Analytical Method: 48,TO-15-SIM
Analytical Date: 11/24/24 16:15
Analyst: JFI

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2469367
Report Date: 12/26/24

Air Canister Certification Results

Lab ID: L2469367-01
Client ID: CAN 2683 SHELF 56
Sample Location:

Date Collected: 11/23/24 14:00
Date Received: 11/23/24
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethybenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



Project Name: BATCH CANISTER CERTIFICATION**Lab Number:** L2469367**Project Number:** CANISTER QC BAT**Report Date:** 12/26/24**Air Canister Certification Results**

Lab ID: L2469367-01

Date Collected: 11/23/24 14:00

Client ID: CAN 2683 SHELF 56

Date Received: 11/23/24

Sample Location:

Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	94		60-140



Project Name: TUFTS STREET**Lab Number:** L2471539**Project Number:** 045163**Report Date:** 12/26/24**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

NA Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2471539-01A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-02A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-03A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-04A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-05A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-06A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-07A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-08A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-09A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-10A	Canister - 6L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)
L2471539-11A	Canister - 2.7L (Batch Certified)	NA	NA			Y	Absent		MCP-TO15-SIM(30)

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2471539
Report Date: 12/26/24

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2471539
Report Date: 12/26/24

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2471539
Report Date: 12/26/24

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: TUFTS STREET
Project Number: 045163

Lab Number: L2471539
Report Date: 12/26/24

REFERENCES

- 101 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air (EPA/625/R-96/010b:January 1999) with QC Requirements & Performance Standards for the Analysis of TO-15 under the Massachusetts Contingency Plan, WSC-CAM-IXB, July 2010.

LIMITATION OF LIABILITIES

Pace Analytical Services performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Pace Analytical Services shall be to re-perform the work at it's own expense. In no event shall Pace Analytical Services be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Pace Analytical Services.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Pace Analytical Services LLCFacility: **Northeast**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**Revision **23**Published Date: **12/09/2024**Page **1** of **1****Certification Information****The following analytes are not included in our Primary NELAP Scope of Accreditation:****Westborough Facility – 8 Walkup Dr. Westborough, MA 01581****EPA 624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625.1:** alpha-Terpineol**EPA 8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol, Azobenzene; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****SM 2540D:** TSS.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****Biological Tissue Matrix:** EPA 3050B**Mansfield Facility – 120 Forbes Blvd. Mansfield, MA 02048****EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Nonpotable Water: **EPA RSK-175 Dissolved Gases****The following analytes are included in our Massachusetts DEP Scope of Accreditation****Westborough Facility – 8 Walkup Dr. Westborough, MA 01581****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility – 320 Forbes Blvd. Mansfield, MA 02048****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Project Manager.



CHAIN OF CUSTODY

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Client Information

Client: GEI Consultants

Address: 400 Unicorn Park Drive,
Woburn MA, 01801

Phone: 781-721-4000

Fax:

Email: labdata@geiconsultants.com

☐ These samples have been previously analyzed by Alpha

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☒

AIR ANALYSIS

PAGE 1 OF 2

Project Information

Project Name: Tufts Street

Project Location: Somerville, MA

Project #: 045163

Project Manager: Chris Coner

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

Time:

Date Rec'd in Lab: 12-5-24

Report Information - Data Deliverables

☐ FAX☐ ADEx

Criteria Checker:

(Default based on Regulatory Criteria Indicated)

Other Formats:

☒ EMAIL (standard pdf report)☐ Additional Deliverables:

Report to: (if different than Project Manager)

ALPHA Job #: L2471539

Billing Information

☐ Same as Client info

PO #:

Regulatory Requirements/Report Limits

State/Fed

Program

Res / Comm

ANALYSIS

TO-15
TO-15 SIM
APH
Subtract Non-petroleum HCs
Fixed Gases
Sulfides & Mercaptans by TO-15

All Columns Below Must Be Filled Out

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION						Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller						Sample Comments (i.e. PID)
		End Date	Start Time	End Time	Initial Vacuum	Final Vacuum							TO-15	TO-15 SIM	APH	Fixed Gases	Sulfides & Mercaptans by TO-15	
71539 -01	045163-103Wash-F1	12/4/24	9:12	9:12	-30.83	-6.84	AA	NMT	6 L	2262	01023	X						see attached list of analytes
71539 -02	045163-103Wash-B1	12/4/24	9:16	9:16	-30.51	-7.25	AA	NMT	6 L	704	01356	X						
71539 -03	045163-103Wash-Unit1	12/4/24	9:23	9:23	-30.41	-5.18	AA	NMT	6 L	3588	01887	X						
-04	045163-103Wash-Unit3	12/4/24	9:28	9:28	-30.48	-7.48	AA	NMT	6 L	2666	0087	X						
-05	045163-103Wash-SV2	12/4/24	10:19	11:19	-30.76	-3.68	SV	NMT	2.7 L	3030	01005	X						
-06	045163-103Wash-SV1	12/4/24	10:22	11:22	-30.47	-3.94	SV	NMT	2.7 L	3203	0261	X						

*SAMPLE MATRIX CODES

AA = Ambient Air (Indoor/Outdoor)

SV = Soil Vapor/Landfill Gas/SVE

Other = Please Specify

Container Type

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Relinquished By:

Date/Time

Received By:

Date/Time:

Nicholas Purolo

12/4/24, 13:30

GEI Fieldroom

12/4/24, 13:30

GEI Fieldroom

12/5/24, 12:25

John Purolo

12/5/24, 12:25

John Purolo

12/5/24, 15:25

John Purolo

12/5/24, 15:25

Indoor Air Sampling Analyte List

- 1,1-Dichloroethane
- 1,1-Dichloroethylene
- trans-1,2-Dichloroethylene
- cis-1,2-Dichloroethylene
- 1,1,1-Trichloroethane
- 1,1,2,2-Tetrachloroethane
- 1,1,2-Trichloroethane
- Tetrachloroethylene
- Trichloroethylene
- Vinyl Chloride

Appendix F Pre-Sampling Checklists and Air Sampling Checklist

SUB-SLAB MONITORING POINT INSTALLATION LOG



Sub-Slab Monitoring
Point IDs:

SV5

Project Name: 10 Morton St

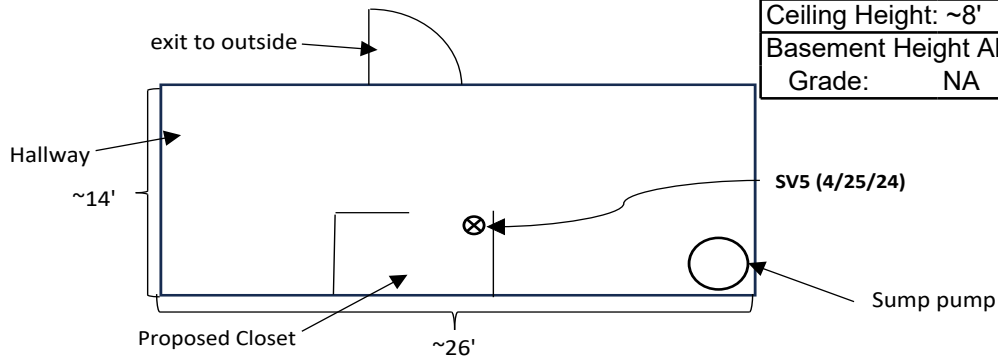
Project Number: 045163

Address: 10 Morton St, Somerville, MA

Date: 4/25/24

Logged By: N. Troccoli

Basement Sketch: (basement, in proposed closet)



Ceiling Height: ~8'

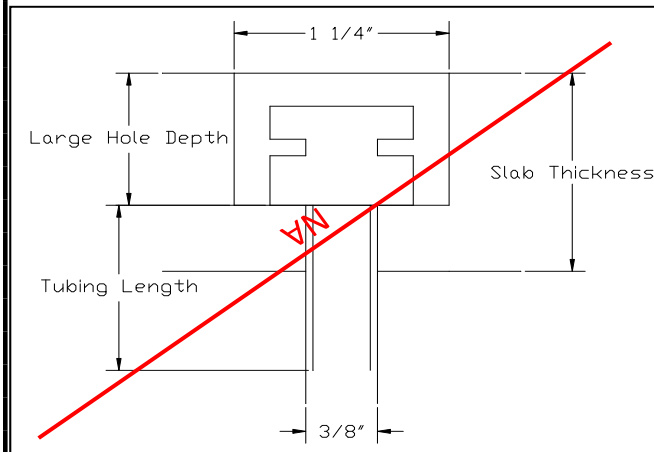
Basement Height Above
Grade: NA

Include: Wall lengths, sump dimension and location, dimensions and locations of any significant penetrations in the ground, sub-slab monitoring point locations, location of sealed vs. non-sealed walls, north arrow

Basement Sketch for Photo Log:

NA

Sub-Slab Monitoring Point Profile:



	SV1			
Slab Thickness:	4"			
Tubing Length:	NA			
Type of Material Under Slab:				
Large Hole Depth:	1.75"			

Comments:

- installed stainless steel VaporPin in point
- NA = not applicable

SUB-SLAB MONITORING POINT INSTALLATION LOG



Sub-Slab Monitoring
Point IDs:

SV6

Project Name: 10 Morton St

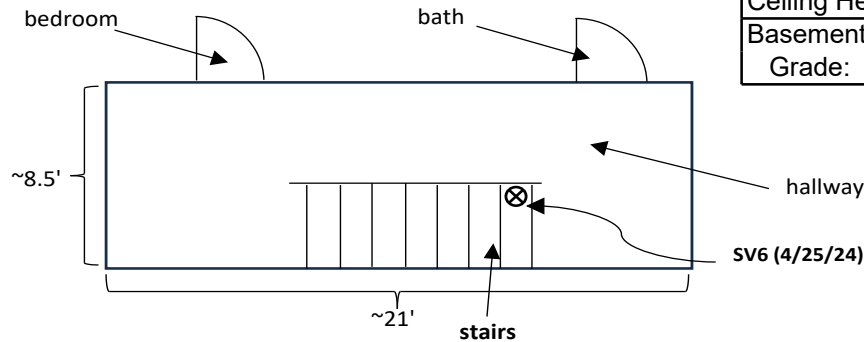
Project Number: 045163

Address: 10 Morton St, Somerville, MA

Date: 4/25/24

Logged By: N. Troccoli

Basement Sketch: (basement, under stairwell)



Ceiling Height: ~8'

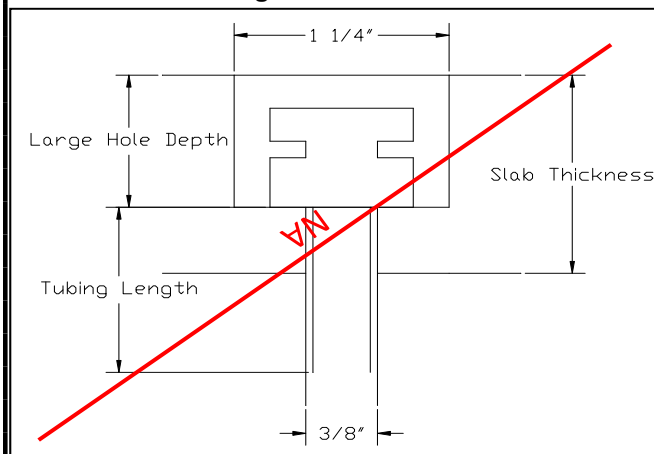
Basement Height Above
Grade: NA

Include: Wall lengths, sump dimension and location, dimensions and locations of any significant penetrations in the ground, sub-slab monitoring point locations, location of sealed vs. non-sealed walls, north arrow

Basement Sketch for Photo Log:

NA

Sub-Slab Monitoring Point Profile:



	SV2			
Slab Thickness:	4"			
Tubing Length:	NA			
Type of Material Under Slab:				
Large Hole Depth:	1.75"			

Comments:

- installed stainless steel VaporPin in point
- NA = not applicable



SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
10 Morton Street - Basement
(SV-5)

Sample ID: 045163-SV-5

Date: 10/9/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 2363

Flow Regulator ID: 02335

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 07:59

Sampling Finish Time: 08:59

During Sampling	
Time	Vacuum
7:59	-30.13
8:14	-25.30
8:29	-20.01
8:44	-14.85
8:59	-9.40

Did Summa Canister go to ambient pressure? No

Pressure gauge reading (Pre-opening): Flow Controller: 0.00 --> -30.13 in.Hg

Pressure gauge reading (After sample collected): Flow Controller: -9.40 --> 0.00 in.Hg

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature:	48°F	51°F
Barometric Pressure:	29.89 inHg	29.89 inHg
Prevailing Wind Direction:	W	W
General Weather Conditions:	Partly Cloudy	Clear

Photographs taken before sampling? Yes **If Yes, what time:** 07:59 **Taken by:** N. Troccoli

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppm): 0.0 ppmv

Soil gas concentration prior to sampling (ppm): 0.2 - 1.4 ppmv

Vapor point purged for ~5 min with a MiniRAE 3000 (500-600 cc/min) prior to sampling.

Comments:



SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
10 Morton Street - Basement
(SV-6)

Sample ID: 045163-SV-6

Date: 10/9/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 2009

Flow Regulator ID: 0910

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 08:02

Sampling Finish Time: 09:02

During Sampling	
Time	Vacuum
8:02	-29.97
8:17	-24.42
8:32	-17.65
8:47	-11.28
9:02	-5.45

Did Summa Canister go to ambient pressure? No

Pressure gauge reading (Pre-opening): Flow Controller: 0.00 --> -29.97 in.Hg

Pressure gauge reading (After sample collected): Flow Controller: -5.45 --> 0.00 in.Hg

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature:	48°F	51°F
Barometric Pressure:	29.89 inHg	29.89 inHg
Prevailing Wind Direction:	W	W
General Weather Conditions:	Partly Cloudy	Clear

Photographs taken before sampling? Yes **If Yes, what time:** 08:02 **Taken by:** N. Troccoli

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppm): 0.0 ppmv

Soil gas concentration prior to sampling (ppm): 0.2 - 1.3 ppmv

Vapor point purged for ~5 min with a MiniRAE 3000 (500-600 cc/min) prior to sampling.

Comments:



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
**31 Tufts St (Unit 104, 3
Bedroom)**

Sample ID: 045163-31TUFT-IA1

Date: 9/5/2024 to 9/6/2024

Sampling personnel: D. Miller

Summa Canister ID: 3912

Flow Regulator ID: 02096

Sample Type / Analysis Method: TO15/Summa

9/5/2024

Sampling Start Time: 11:04 (9/5/2024)

9/6/2024

Sampling Finish Time: 11:04 (9/6/2024)

During Sampling	
Time	Vacuum
11:04	-30.91
11:04	-5.20

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.91 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -5.20 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~73°F
Barometric Pressure (in. Hg): 30.41
Prevailing Wind Direction: SE (4mph)
General Weather Conditions: Sunny

~70°F
30.17
E (7mph)
Cloudy

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~73°F
Barometric Pressure (in. Hg): 30.41

~73°F
30.13

PID readings at sample location (ppmv): 0.0 - 0.1

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? Yes **If yes, provide detail:** One resident present in unit during set up

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~7' (on fridge).

Basement Ceiling Height (to joists): Front NA ; Back NA.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):

- sample cannister placed on top of fridge to prevent potential children present from interfering; therefore, slightly higher than typical



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (Unit 101)

Sample ID: 045163-31TUFT-IA2

Date: 9/5/2024 to 9/6/2024

Sampling personnel: D. Miller

Summa Canister ID: 2001

Flow Regulator ID: 0181

Sample Type / Analysis Method: TO15/Summa

9/5/2024

Sampling Start Time: 10:43 (9/5/2024)

9/6/2024

Sampling Finish Time: 10:45 (9/6/2024)

During Sampling	
Time	Vacuum
10:43	-30.11
10:45	-7.52

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.11 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -7.52 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~73°F
Barometric Pressure (in. Hg): 30.41
Prevailing Wind Direction: SE (4mph)
General Weather Conditions: Sunny

~70°F
30.17
E (7mph)
Cloudy

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~65°F
Barometric Pressure (in. Hg): 30.41

~65°F
30.13

PID readings at sample location (ppmv): 0.1 - 0.2

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** Yes, AC on

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? Yes **If yes, provide detail:** One resident present in unit during set up

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~5.5' (on dining room cabinet).

Basement Ceiling Height (to joists): Front ~10' ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (Utility Closet)

Sample ID: 045163-31TUFT-IA3

Date: 9/5/2024 to 9/6/2024

Sampling personnel: D. Miller

Summa Canister ID: 319

Flow Regulator ID: 0985

Sample Type / Analysis Method: TO15/Summa

9/5/2024

Sampling Start Time: 10:57 (9/5/2024)

9/6/2024

Sampling Finish Time: 10:59 (9/6/2024)

During Sampling	
Time	Vacuum
10:57	-30.42
10:59	-6.48

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.42 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -6.48 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~73°F
Barometric Pressure (in. Hg): 30.41
Prevailing Wind Direction: SE (4mph)
General Weather Conditions: Sunny

~70°F
30.17
E (7mph)
Cloudy

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~72°F
Barometric Pressure (in. Hg): 30.41

~72°F
30.13

PID readings at sample location (ppmv): 0.0 - 0.1

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? Yes **If yes, provide detail:** residents in building; no resident access to utility room

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front ~10' ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):

- Cleaning supplies for building maintenance stored in utility closet



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (Unit 103)

Sample ID: 045163-31TUFT-IA4

Date: 9/5/2024 to 9/6/2024

Sampling personnel: D. Miller

Summa Canister ID: 2931

Flow Regulator ID: 02225

Sample Type / Analysis Method: TO15/Summa

9/5/2024

Sampling Start Time: 10:49 (9/5/2024)

9/6/2024

Sampling Finish Time: 10:53 (9/6/2024)

During Sampling	
Time	Vacuum
10:49	-30.34
10:53	-10.45

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.34 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -10.45 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~73°F
Barometric Pressure (in. Hg): 30.41
Prevailing Wind Direction: SE (4mph)
General Weather Conditions: Sunny

~70°F
30.17
E (7mph)
Cloudy

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~72°F
Barometric Pressure (in. Hg): 30.41

~72°F
30.13

PID readings at sample location (ppmv): 0.0 - 0.1

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** Yes, air circulation on, no AC

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? No **If yes, provide detail:** Resident not present during setup or pickup

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front ~10' ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (Unit 102)

Sample ID: 045163-31TUFT-IA5

Date: 9/5/2024 to 9/6/2024

Sampling personnel: D. Miller

Summa Canister ID: 629

Flow Regulator ID: 02621

Sample Type / Analysis Method: TO15/Summa

9/5/2024

Sampling Start Time: 10:45 (9/5/2024)

9/6/2024

Sampling Finish Time: 10:48 (9/6/2024)

During Sampling	
Time	Vacuum
10:45	-28.08
10:48	1.89

Did Summa canister go to ambient pressure? Yes*

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -28.08 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: +1.89 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~73°F
Barometric Pressure (in. Hg): 30.41
Prevailing Wind Direction: SE (4mph)
General Weather Conditions: Sunny

~70°F
30.17
E (7mph)
Cloudy

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~68°F
Barometric Pressure (in. Hg): 30.41

~68°F
30.13

PID readings at sample location (ppmv): 0.3

Photographs taken before sampling? Yes If Yes, what time: Taken by:

Photographs taken after sampling? Yes If Yes, what time: Taken by:

Was the building aired out prior to sample collection? No If yes, how long?

Windows open? No Ventilation fans? Yes, AC on

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? Yes If yes, provide detail: One resident in unit

Did any of the occupants NOT follow instruction for residents? No If yes, describe below:

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front ~10' ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):

- gained access to unit at 10:48 and shut off immediately. Digital pressure gauge read +1.89 in. Hg.



SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (Utility Closet)

Sample ID: 045163-31TUFT-SV1

Date: 9/6/2024

Sampling personnel: D. Miller

Summa Canister ID: 3096

Flow Regulator ID: 0007

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 11:43

Sampling Finish Time: 12:43

During Sampling	
Time	Vacuum
11:43	-29.77
11:58	-24.39
12:11	-19.23
12:28	-12.06
12:43	-6.26

Did Summa Canister go to ambient pressure? No

Pressure gauge reading (Pre-opening): Flow Controller: 0.00 --> -29.77 in.Hg

Pressure gauge reading (After sample collected): Flow Controller: -6.26 --> 0.00 in.Hg

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature:	70°F	73°F
Barometric Pressure:	30.13 inHg	30.13 inHg
Prevailing Wind Direction:	8mph E	8mph E
General Weather Conditions:	Cloudy	Mostly Cloudy

Photographs taken before sampling? Yes **If Yes, what time:** 11:43 **Taken by:** D. Miller

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppm): 0.0 - 0.1 ppmv

Soil gas concentration prior to sampling (ppm): 2.2 ppmv

Vapor point purged for ~5 min with a MiniRAE 3000 (500-600 cc/min) prior to sampling.

Comments:

- Sample point installed on 10/17/23
- Building cleaning supplies stored on rack above sample point in closet. Appears some spillage of cleaning chemicals on floor.



SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
31 Tufts St (stairwell 2)

Sample ID: 045163-31TUFT-SV2

Date: 9/6/2024

Sampling personnel: D. Miller

Summa Canister ID: 2207

Flow Regulator ID: 01714

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 11:40

Sampling Finish Time: 12:40

During Sampling	
Time	Vacuum
11:40	-29.72
11:55	-24.23
12:10	-18.49
12:25	-12.32
12:40	-6.56

Did Summa Canister go to ambient pressure? No

Pressure gauge reading (Pre-opening): Flow Controller: 0.00 --> -29.72 in.Hg

Pressure gauge reading (After sample collected): Flow Controller: -6.56 --> 0.00 in.Hg

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature:	70°F	73°F
Barometric Pressure:	30.13 inHg	30.13 inHg
Prevailing Wind Direction:	8mph E	8mph E
General Weather Conditions:	Cloudy	Mostly Cloudy

Photographs taken before sampling? Yes **If Yes, what time:** 11:40 **Taken by:** D. Miller

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppm): 0.0 - 0.1 ppmv

Soil gas concentration prior to sampling (ppm): 0.2 ppmv

Vapor point purged for ~5 min with a MiniRAE 3000 (500-600 cc/min) prior to sampling.

Comments:

- Sample point installed on 10/27/23



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
103 Washington (first floor)

Sample ID: 045163-103Wash-F1

Date: 12/3/2024 to 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 2262

Flow Regulator ID: 01023

Sample Type / Analysis Method: TO15/Summa

12/3/2024

Sampling Start Time: 09:12 (12/3/2024)

Sampling Finish Time: 09:12 (12/4/2024)

12/4/2024

During Sampling	
Time	Vacuum
9:12	-30.83
9:56	-30.15
9:12	-6.84

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.83 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -6.84 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~30°F
Barometric Pressure (in. Hg): 30.19
Prevailing Wind Direction: E
General Weather Conditions: Cloudy

~28°F
30.21
E
Sunny

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~65°F
Barometric Pressure (in. Hg): 30.19

~65°F
30.21

PID readings at sample location (ppmv): 0.0

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? No **If yes, provide detail:**

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front _____ ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
103 Washington (basement)

Sample ID: 045163-103Wash-B1

Date: 12/3/2024 to 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 704

Flow Regulator ID: 01356

Sample Type / Analysis Method: TO15/Summa

12/3/2024

Sampling Start Time: 09:16 (12/3/2024)

Sampling Finish Time: 09:16 (12/4/2024)

12/4/2024

During Sampling	
Time	Vacuum
9:16	-30.51
9:57	-29.89
9:16	-7.25

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.51 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -7.25 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~30°F
Barometric Pressure (in. Hg): 30.19
Prevailing Wind Direction: E
General Weather Conditions: Cloudy

~28°F
30.21
E
Sunny

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~70°F
Barometric Pressure (in. Hg): 30.19

~70°F
30.21

PID readings at sample location (ppmv): 0.2

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? No **If yes, provide detail:**

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front _____ ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
103 Washington (unit 1)

Sample ID: 045163-103Wash-Unit1

Date: 12/3/2024 to 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 3588

Flow Regulator ID: 01887

Sample Type / Analysis Method: TO15/Summa

12/3/2024

Sampling Start Time: 09:23 (12/3/2024)

Sampling Finish Time: 09:23 (12/4/2024)

12/4/2024

During Sampling	
Time	Vacuum
9:23	-30.41
9:58	-29.90
9:23	-5.18

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.41 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -5.18 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~30°F
Barometric Pressure (in. Hg): 30.19
Prevailing Wind Direction: E
General Weather Conditions: Cloudy

~29°F
30.21
E
Sunny

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~70°F
Barometric Pressure (in. Hg): 30.19

~70°F
30.20

PID readings at sample location (ppmv): 0.1

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? No **If yes, provide detail:**

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front _____ ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
103 Washington (unit 3)

Sample ID: 045163-103Wash-Unit3

Date: 12/3/2024 to 12/4/2024

Sampling personnel: N. Troccolo

Summa Canister ID: 2666

Flow Regulator ID: 0087

Sample Type / Analysis Method: TO15/Summa

12/3/2024

Sampling Start Time: 09:28 (12/3/2024)

Sampling Finish Time: 09:28 (12/4/2024)

12/4/2024

During Sampling	
Time	Vacuum
9:28	-30.48
9:59	-30.01
9:28	-7.48

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.48 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -7.48 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~30°F
Barometric Pressure (in. Hg): 30.19
Prevailing Wind Direction: E
General Weather Conditions: Cloudy

~29°F
30.21
E
Sunny

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~72°F
Barometric Pressure (in. Hg): 30.19

~72°F
30.20

PID readings at sample location (ppmv): 0.2

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? Yes **If yes, provide detail:**

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front _____ ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):

- odor of "swiffer"-like cleaning chemicals in unit at time of sampling



SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
103 Washington

Sample ID: 045163-103Wash-SV1

Date: 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 3203

Flow Regulator ID: 0261

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 10:22

Sampling Finish Time: 11:22

During Sampling	
Time	Vacuum
10:22	-30.47
10:37	-24.42
10:52	-17.19
11:07	-10.00
11:22	-3.94

Did Summa Canister go to ambient pressure? No

Pressure gauge reading (Pre-opening): Flow Controller: 0.00 --> -30.47 in.Hg

Pressure gauge reading (After sample collected): Flow Controller: -3.94 --> 0.00 in.Hg

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature: 30°F
Barometric Pressure: 30.20 inHg
Prevailing Wind Direction: E
General Weather Conditions: Sunny

34°F
30.20 inHg
E
Sunny

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppm): 0.2 - 0.3 ppmv

Soil gas concentration prior to sampling (ppm): 0.0 ppmv

Vapor point purged for ~5 min with a MiniRAE 3000 (500-600 cc/min) prior to sampling.

Comments:



SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
103 Washington

Sample ID: 045163-103Wash-SV1

Date: 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 3030

Flow Regulator ID: 01005

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 10:19

Sampling Finish Time: 11:19

During Sampling	
Time	Vacuum
10:19	-30.76
10:34	-24.19
10:49	-17.01
11:04	-10.23
11:19	-3.68

Did Summa Canister go to ambient pressure? No

Pressure gauge reading (Pre-opening): Flow Controller: 0.00 --> -30.76 in.Hg

Pressure gauge reading (After sample collected): Flow Controller: -3.68 --> 0.00 in.Hg

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature: 30°F
Barometric Pressure: 30.20 inHg
Prevailing Wind Direction: E
General Weather Conditions: Sunny

34°F
30.20 inHg
E
Sunny

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppm): 0.3 ppmv

Soil gas concentration prior to sampling (ppm): 0.0 ppmv

Vapor point purged for ~5 min with a MiniRAE 3000 (500-600 cc/min) prior to sampling.

Comments:



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
105 Washington (first floor)

Sample ID: 045163-105Wash-F1

Date: 12/3/2024 to 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 3596

Flow Regulator ID: 02199

Sample Type / Analysis Method: TO15/Summa

12/3/2024

Sampling Start Time: 09:32 (12/3/2024)

12/4/2024

Sampling Finish Time: 09:32 (12/4/2024)

During Sampling	
Time	Vacuum
9:32	-30.42
9:32	-7.99

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.42 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -7.99 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~31°F
Barometric Pressure (in. Hg): 30.20
Prevailing Wind Direction: E
General Weather Conditions: Cloudy

~29°F
30.20
E
Sunny

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~72°F
Barometric Pressure (in. Hg): 30.20

~72°F
30.20

PID readings at sample location (ppmv): 0.2

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? Yes **If yes, provide detail:** commercial office

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front _____ ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
105 Washington (second floor)

Sample ID: 045163-105Wash-F2

Date: 12/3/2024 to 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 3356

Flow Regulator ID: 01425

Sample Type / Analysis Method: TO15/Summa

12/3/2024

Sampling Start Time: 09:45 (12/3/2024)

12/4/2024

Sampling Finish Time: 09:45 (12/4/2024)

During Sampling	
Time	Vacuum
9:45	-30.82
9:45	-5.82

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.82 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -5.82 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~31°F
Barometric Pressure (in. Hg): 30.20
Prevailing Wind Direction: E
General Weather Conditions: Cloudy

~29°F
30.20
E
Sunny

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~72°F
Barometric Pressure (in. Hg): 30.20

~72°F
30.20

PID readings at sample location (ppmv): 0.0

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? Yes **If yes, provide detail:** commercial office

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front _____ ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
105 Washington (basement)

Sample ID: 045163-105Wash-B1

Date: 12/3/2024 to 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 1858

Flow Regulator ID: 02233

Sample Type / Analysis Method: TO15/Summa

12/3/2024

Sampling Start Time: 09:40 (12/3/2024)

12/4/2024

Sampling Finish Time: 12:41 (12/4/2024)

During Sampling	
Time	Vacuum
9:40	-30.32
9:40	-16.50
12:12	-14.83
12:41	-14.51

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.32 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -14.51 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~31°F
Barometric Pressure (in. Hg): 30.20
Prevailing Wind Direction: E
General Weather Conditions: Cloudy

~36°F
30.16
NE
Sunny

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~72°F
Barometric Pressure (in. Hg): 30.20

~72°F
30.21

PID readings at sample location (ppmv): 0.1

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? Yes **If yes, provide detail:** commercial office

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front _____ ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):



AMBIENT AIR SAMPLING CHECKLIST

Sampling Location:
105 Washington (basement)

Sample ID: 045163-105Wash-B2

Date: 12/3/2024 to 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 2777

Flow Regulator ID: 0208

Sample Type / Analysis Method: TO15/Summa

12/3/2024

Sampling Start Time: 09:38 (12/3/2024)

12/4/2024

Sampling Finish Time: 09:38 (12/4/2024)

During Sampling	
Time	Vacuum
9:38	-30.61
9:38	-9.37

Did Summa canister go to ambient pressure? No

Vacuum pressure reported by Laboratory: ---

Pressure gauge reading (Pre-opening): Flow Controller: -30.61 in. Hg (0.00 before opening)

Pressure gauge reading (After sample collected): Flow Controller: -9.37 in. Hg (at end)

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature (°F): ~31°F
Barometric Pressure (in. Hg): 30.20
Prevailing Wind Direction: E
General Weather Conditions: Cloudy

~29°F
30.21
E
Sunny

Environmental Conditions (At Sample Location):

Before Sampling

After Sampling

Temperature (°F): ~68°F
Barometric Pressure (in. Hg): 30.20

~65°F
30.21

PID readings at sample location (ppmv): 0.0

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Photographs taken after sampling? Yes **If Yes, what time:** **Taken by:**

Was the building aired out prior to sample collection? No **If yes, how long?**

Windows open? No **Ventilation fans?** No

Was there significant precipitation within 12 hours of (or during) the sampling event? No

Were any of the residents home during sampling? Yes **If yes, provide detail:** commercial office

Did any of the occupants NOT follow instruction for residents? No **If yes, describe below:**

Air intake at ~4'10".

Basement Ceiling Height (to joists): Front _____ ; Back _____.

Provide any information that may be pertinent to the sampling event and may assist in the data interpretation process. Also, note the usage of the basement (storage only, laundry, etc.):



SUB-SLAB SAMPLING CHECKLIST

Sampling Location:
105 Washington

Sample ID: 045163-105Wash-SV1

Date: 12/4/2024

Sampling personnel: N. Troccoli

Summa Canister ID: 2238

Flow Regulator ID: 02125

Sample Type / Analysis Method: SUMMA/TO-15

Sampling Start Time: 11:40

Sampling Finish Time: 12:40

During Sampling	
Time	Vacuum
11:40	-30.16
11:55	-24.84
12:10	-17.15
12:25	-12.26
12:40	-5.65

Did Summa Canister go to ambient pressure? No

Pressure gauge reading (Pre-opening): Flow Controller: 0.00 --> -30.16 in.Hg

Pressure gauge reading (After sample collected): Flow Controller: -5.65 --> 0.00 in.Hg

Environmental Conditions (Outside):

Before Sampling

After Sampling

Temperature: 34°F
Barometric Pressure: 30.20 inHg
Prevailing Wind Direction: NE
General Weather Conditions: Sunny

36°F
30.16 inHg
NE
Sunny

Photographs taken before sampling? Yes **If Yes, what time:** **Taken by:**

Vacuum prior to sampling (in. WC): 0.000

Ambient air concentration (ppm): 0.0 - 0.1 ppmv

Soil gas concentration prior to sampling (ppm): 0.0 - 0.1 ppmv

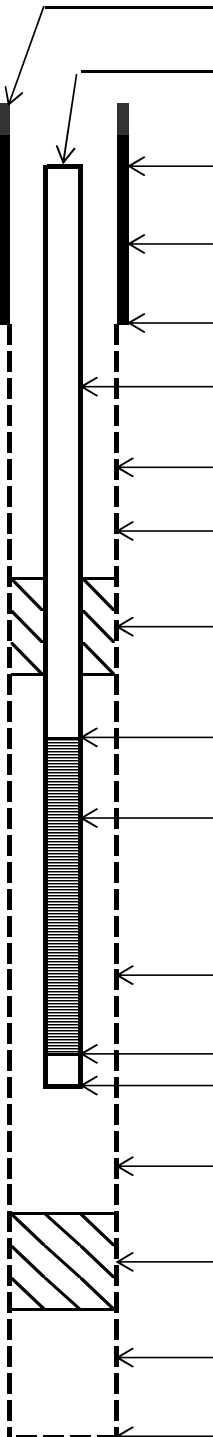
Vapor point purged for ~5 min with a MiniRAE 3000 (500-600 cc/min) prior to sampling.

Comments:

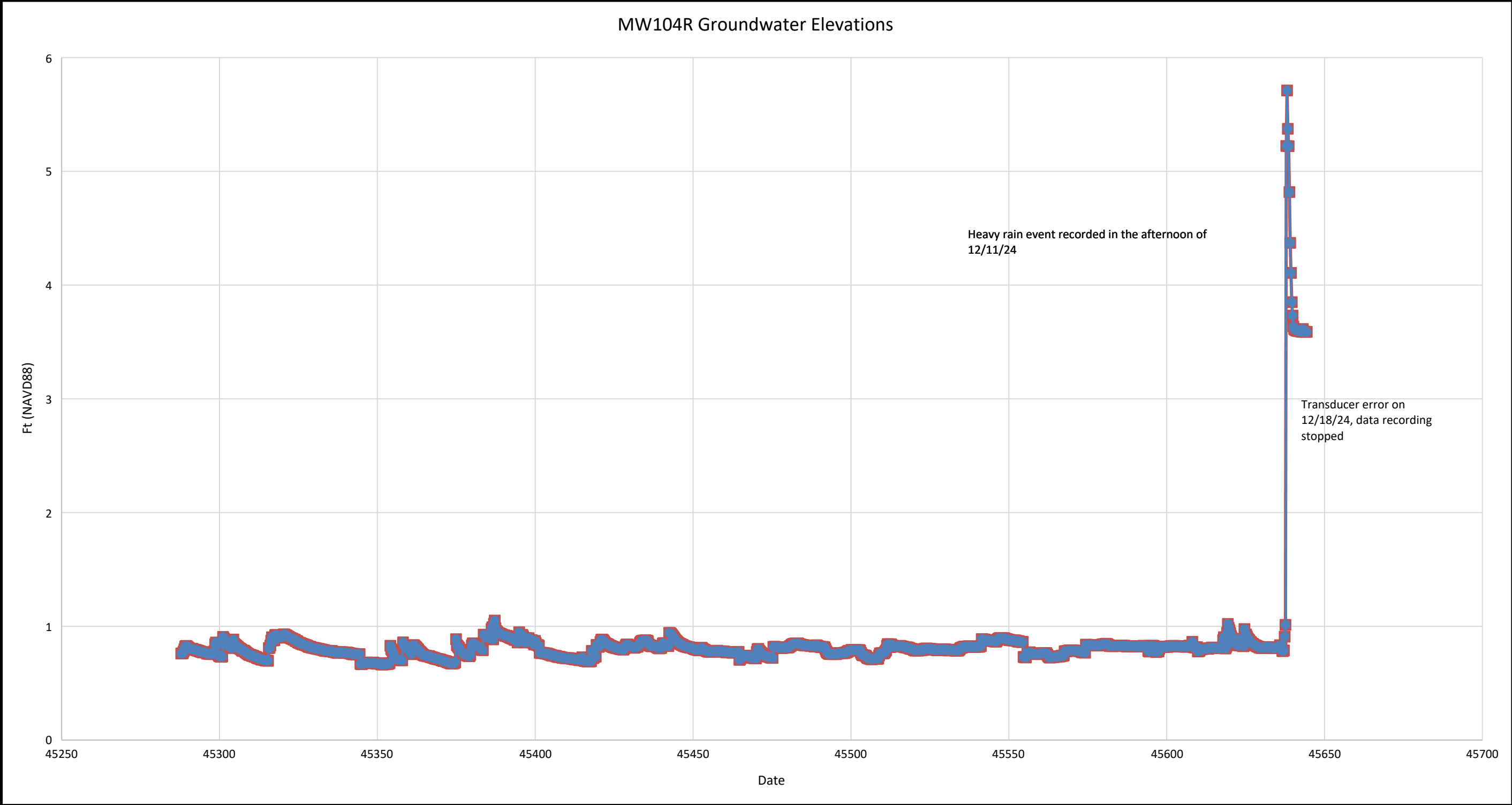
Appendix G Boring and Monitoring Well Installation Logs

BORING INFORMATION LOCATION: 17 Knowlton Street GROUND SURFACE EL. (ft): NM VERTICAL DATUM: TOTAL DEPTH (ft): 15.0 LOGGED BY: C. McAllum-Green							BORING MW111R PAGE 1 of 1							
DRILLING INFORMATION HAMMER TYPE: Automatic AUGER I.D./O.D.: NA / NA DRILLING METHOD: Drive and Wash WATER LEVEL DEPTHS (ft): Not measured									CASING I.D./O.D.: 4 inch / NA DRILL ROD O.D.: NM CORE BARREL TYPE: CORE BARREL I.D./O.D. NA / NA					
ABBREVIATIONS: Pen. = Penetration Length Rec. = Recovery Length RQD = Rock Quality Designation = Length of Sound Cores>4 in / Pen., % WOR = Weight of Rods WOH = Weight of Hammer									S = Split Spoon Sample C = Core Sample U = Undisturbed Sample SC = Sonic Core DP = Direct Push Sample HSA = Hollow-Stem Auger		Qp = Pocket Penetrometer Strength Sv = Pocket Torvane Shear Strength LL = Liquid Limit PI = Plasticity Index PID = Photoionization Detector I.D./O.D. = Inside Diameter/Outside Diameter		NA, NM = Not Applicable, Not Measured Blows per 6 in.: 140-lb hammer falling 30 inches to drive a 2-inch-O.D. split spoon sampler.	
Elev. (ft)	Depth (ft)	Sample Information				Drilling Remarks/ Field Test Data	Layer Name	Soil and Rock Description						
		Sample No.	Depth (ft)	Pen./Rec. (in)	Blows per 6 in. or RQD									
	5	S1	0 to 5	60/60		PID: S1 = 0.1 ppmv	FILL	G1 SILTY SAND (SM): ~75% fine to coarse sand, ~20% subangular gravel up to 2", ~5% nonplastic fines, brown, dry.						
	10	S2	9 to 11	24/11	11-23-31-50		TILL	S1 NARROWLY GRADED SAND WITH SILT AND GRAVEL (SP-SM): ~65% fine to medium sand, ~25% gravel up to 0.5", ~10% nonplastic fines, brown, moist.						
								No recovery, hard drilling.						
	15							END OF BORING AT 15'. COMPLETED AS MONITORING WELL MW111R SCREENED FROM 5 TO 15 feet.						
NOTES: Location vacuum excavated from 0 to 5'. Roller bit used from 11 to 15' due to cobbles. Soil samples screened in the field for VOCs using a PID with 10.6 eV lamp, calibrated to an isobutylene standard. ppmv: parts per million by volume.							PROJECT NAME: Tufts Street CITY/STATE: Somerville, Massachusetts GEI PROJECT NUMBER: 045163							

GEI WOBURN STD 1-LOCATION-LAYER NAME MW111R BORING.GPJ 2/11/25

Groundwater Well Installation Log				MW-111R	
Project		Tufts Street		GEI Proj. No. 1904684	
City / Town		Somerville, MA		Location 17 Knowlton Street	
Client		UniFirst			
Contractor		Northern Drill Service			
Driller		T. Kennedy		Install Date 10/31/2024	
GEI Rep.		C. McCallum-Green			
Survey Datum: NAVD88				Length of Surface Casing above Ground flushmount	
Ground Elevation: NM				Dist. Top of Surf. Casing to Top of Riser Pipe 4"	
11/25/202412:5013.75' 11/14/20248:0013.92' 10/31/202411:501.05' DateTimeDistance to ▼ below top of riser pipe General Soil Conditions (Not to Scale)  Type and Thickness of Seal around Surface Casingcement ID of Surface Casing3.5" Type of Surface CasingSteel roadbox Depth Bottom of Surface Casing1' ID and OD of Riser Pipe2" ID / 2.375" OD Type of Riser PipeSch. 40 PVC Type of Backfill around Riser PipeSand Diameter of Borehole4" Depth Top of Seal1' Type of SealGranular bentonite Depth Bottom of Seal3' Depth Top of Screened Section5' Type of ScreenSch. 40 PVC Description of Screen Openings0.010" ID and OD of Screened Section2" ID / 2.375" OD Type of Filter MaterialSand Depth Bottom of Screened Section15' Depth Bottom of Silt Trap15' Depth Bottom of Filter Material15' Depth Top of SealNA Type of SealNA Depth Bottom of SealNA Type of Backfill below Filter MaterialNA Bottom of Borehole15'					

Appendix H Transducer Data Graphs



Phase V Status Report No. 27 and
Remedial Monitoring Report No. 42
50 Tufts Street, Somerville, Massachusetts

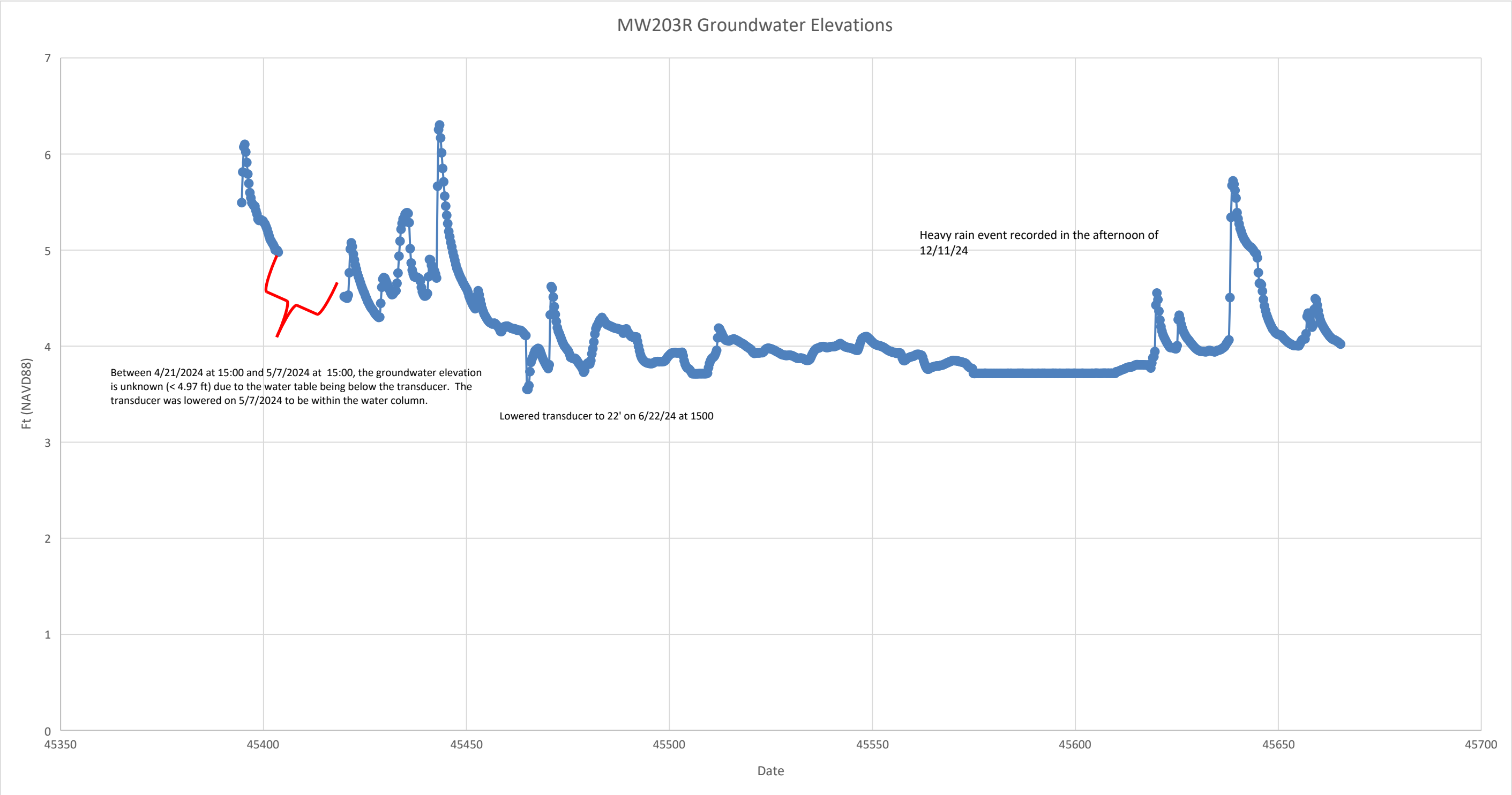
UniFirst Corporation
Wilmington, Massachusetts



MW104R Transducer Data

Project 04516-3

February 2025



Phase V Status Report No. 27 and
Remedial Monitoring Report No. 42
50 Tufts Street, Somerville, Massachusetts

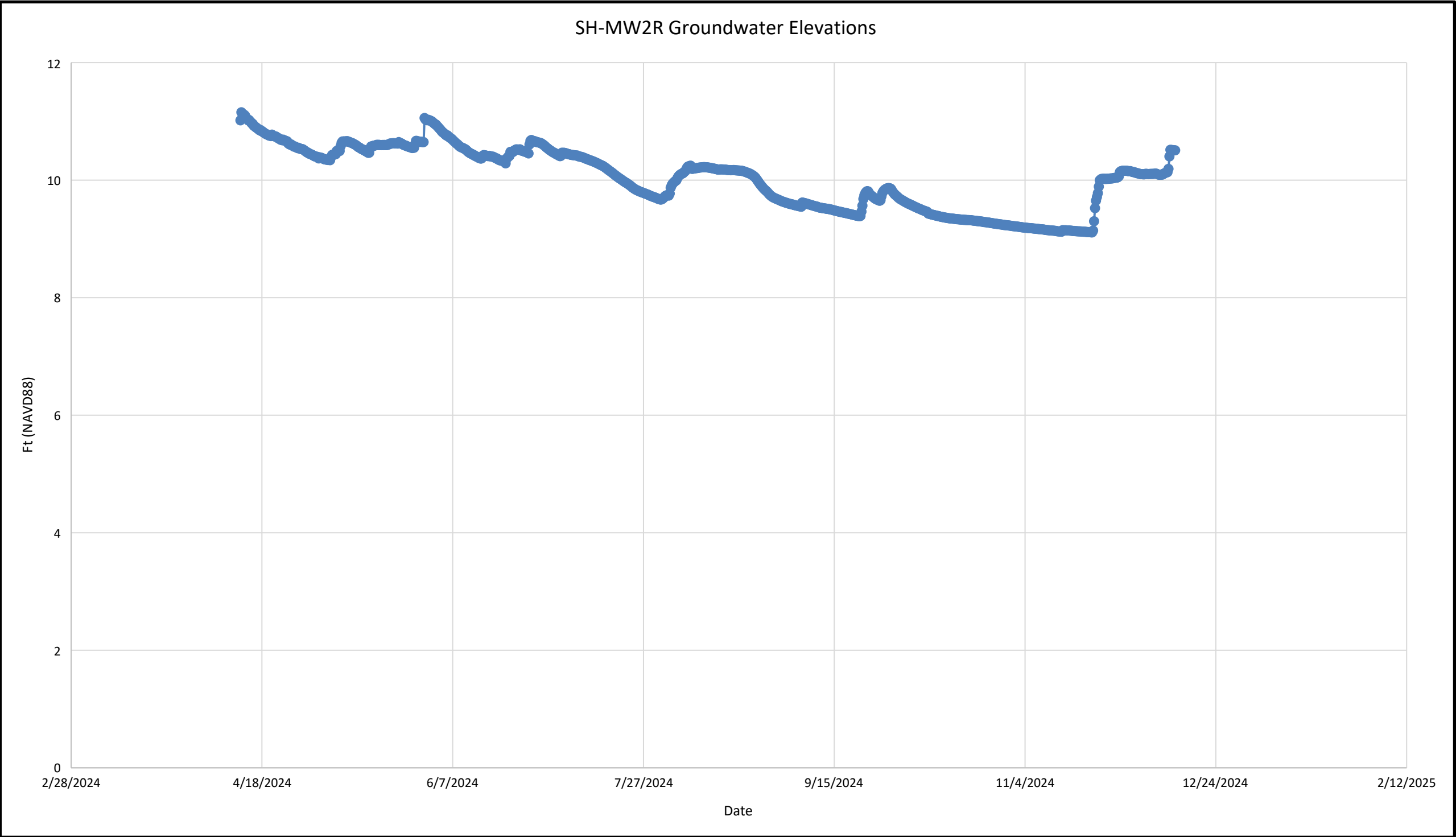
UniFirst Corporation
Wilmington, Massachusetts



Project 04516-3

MW203R Transducer Data

February 2025



Phase V Status Report No. 27 and
Remedial Monitoring Report No. 42
50 Tufts Street, Somerville, Massachusetts

UniFirst Corporation
Wilmington, Massachusetts



SH-MW2R Transducer Data

Project 04516-3

February 2025

Appendix I Field Monitoring Forms and Inspection Logs

**50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form**

GENERAL MONITORING INFORMATION																												
GEI Field Representative(s):		N. Troccoli		Monitoring Start Time: 1:40 PM																								
				Monitoring End Time: 1:55 PM																								
Date:		06/21/24																										
Weather:		Mid 80's, Sunny																										
INSTRUMENTATION INFORMATION																												
	Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?																							
	PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	Y / N 100.4 ppm																							
	Manometer (in. H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading																							
	Anemometer (CFM)	Reed	R4500SD	N/A	N/A																							
FIELD MEASUREMENTS & OBSERVATIONS																												
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data																							
		Monitoring Point	Pressure (in. H₂O)	VOC (ppm)	Velocity (ft/min)	System Flowrate (CFM):																						
Fenced Enclosure Secure?	Yes	West Header	NM	NM	NM	NM																						
Blower On?	Yes	Center Header	NM	NM																								
Condensate Accumulated?	No	East Header	NM	NM	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr><th align="center" colspan="2">Tank Exterior Monitoring</th></tr> <tr><th align="center" colspan="2">Bubbling Paint Visible?</th></tr> <tr> <th>Tank</th> <th>Y/N</th> </tr> </thead> <tbody> <tr><td>A</td><td>Yes</td></tr> <tr><td>B</td><td>Yes</td></tr> <tr><td>C</td><td>Yes</td></tr> <tr><th align="center" colspan="2">Rust Visible?</th></tr> <tr> <th>Tank</th> <th>Y/N</th> </tr> <tr><td>A</td><td>Yes</td></tr> <tr><td>B</td><td>Yes</td></tr> <tr><td>C</td><td>Yes</td></tr> </tbody> </table>		Tank Exterior Monitoring		Bubbling Paint Visible?		Tank	Y/N	A	Yes	B	Yes	C	Yes	Rust Visible?		Tank	Y/N	A	Yes	B	Yes	C	Yes
Tank Exterior Monitoring																												
Bubbling Paint Visible?																												
Tank	Y/N																											
A	Yes																											
B	Yes																											
C	Yes																											
Rust Visible?																												
Tank	Y/N																											
A	Yes																											
B	Yes																											
C	Yes																											
Condensate Drained?	NA	North Header	NM	NM																								
Hour Meter Reading?	NM	South Header	NM	NM																								
Lead Carbon Unit?	A	Combined System Influent	NM	1.8																								
Secondary Carbon Unit?	B	Blower Effluent	NM	2.0																								
Polish Carbon Unit?	N/A	Lead Carbon Effluent	NM	0.0																								
VFD Setting (Hz)	60	Secondary Carbon Effluent	NM	0.0																								
		System Effluent	Effluent is secondary tank - Tank C offline																									
		Ambient Air		0.0																								
		Blower Filter Inlet	NM																									
		Blower Filter Outlet	NM																									
ABBREVIATIONS		COMMENTS																										
ppm = parts per million CFM = cubic feet per minute ft/min = feet per minute PID = photoionization detector N/A = Not Applicable VOC = volatile organic compound in. H ₂ O = inches of water column NM = Not Measured VFD = Variable Frequency Drive																												

50 Tufts Street Sub-Slab Depressurization System Monthly Monitoring Form

GENERAL MONITORING INFORMATION						
GEI Field Representative(s):		N. Troccoli		Monitoring Start Time: 12:00 PM		
				Monitoring End Time: 12:15 PM		
Date:		07/10/24				
Weather:		90's, Sunny				
INSTRUMENTATION INFORMATION						
	Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?	
	PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	Y / N 100.6 ppm	
	Manometer (in. H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading	
	Anemometer (CFM)	Reed	R4500SD	N/A	N/A	
FIELD MEASUREMENTS & OBSERVATIONS						
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data	
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Velocity (ft/min)	System Flowrate (CFM):
Fenced Enclosure Secure?	Yes	West Header	-3.10	1.4	6366	556
Blower On?	Yes	Center Header	-3.07	2.0		
Condensate Accumulated?	No	East Header	-3.12	1.0	Tank Exterior Monitoring	
Condensate Drained?	NA	North Header	-3.11	2.6	Bubbling Paint Visible?	
Hour Meter Reading?	NM	South Header	-3.18	5.1	Tank	Y/N
Lead Carbon Unit?	A	Combined System Influent	-6.63	2.1	A	Yes
Secondary Carbon Unit?	B	Blower Effluent	30.30	2.0	B	Yes
Polish Carbon Unit?	N/A	Lead Carbon Effluent	17.49	0.0	C	Yes
VFD Setting (Hz)	60	Secondary Carbon Effluent	1.37	0.0	Rust Visible?	
		System Effluent	Effluent is secondary tank - Tank C offline		Tank	Y/N
		Ambient Air		0.0	A	Yes
		Blower Filter Inlet	-16		B	Yes
		Blower Filter Outlet	NM		C	Yes
ABBREVIATIONS		COMMENTS				
ppm = parts per million CFM = cubic feet per minute ft/min = feet per minute PID = photoionization detector N/A = Not Applicable VOC = volatile organic compound in. H2O = inches of water column NM = Not Measured VFD = Variable Frequency Drive						

**50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form**

GENERAL MONITORING INFORMATION																												
GEI Field Representative(s):		N. Troccoli		Monitoring Start Time: 9:45 AM																								
				Monitoring End Time: 10:00 AM																								
Date:		08/09/24																										
Weather:		Mid 80's, Sunny																										
INSTRUMENTATION INFORMATION																												
	Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?																							
	PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	Y / N 100.6 ppm																							
	Manometer (in. H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading																							
	Anemometer (CFM)	Reed	R4500SD	N/A	N/A																							
FIELD MEASUREMENTS & OBSERVATIONS																												
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data																							
		Monitoring Point	Pressure (in. H₂O)	VOC (ppm)	Velocity (ft/min)	System Flowrate (CFM):																						
Fenced Enclosure Secure?	Yes	West Header	NM	NM	NM	NM																						
Blower On?	Yes	Center Header	NM	NM																								
Condensate Accumulated?	No	East Header	NM	NM	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr style="background-color: #ffff00;"> <th align="center" colspan="2">Tank Exterior Monitoring</th> </tr> <tr style="background-color: #ffff00;"> <th align="center" colspan="2">Bubbling Paint Visible?</th> </tr> <tr> <th>Tank</th> <th>Y/N</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Yes</td> </tr> <tr> <td>B</td> <td>Yes</td> </tr> <tr> <td>C</td> <td>Yes</td> </tr> <tr style="background-color: #ffff00;"> <th align="center" colspan="2">Rust Visible?</th> </tr> <tr> <th>Tank</th> <th>Y/N</th> </tr> <tr> <td>A</td> <td>Yes</td> </tr> <tr> <td>B</td> <td>Yes</td> </tr> <tr> <td>C</td> <td>Yes</td> </tr> </tbody> </table>		Tank Exterior Monitoring		Bubbling Paint Visible?		Tank	Y/N	A	Yes	B	Yes	C	Yes	Rust Visible?		Tank	Y/N	A	Yes	B	Yes	C	Yes
Tank Exterior Monitoring																												
Bubbling Paint Visible?																												
Tank	Y/N																											
A	Yes																											
B	Yes																											
C	Yes																											
Rust Visible?																												
Tank	Y/N																											
A	Yes																											
B	Yes																											
C	Yes																											
Condensate Drained?	NA	North Header	NM	NM																								
Hour Meter Reading?	NM	South Header	NM	NM																								
Lead Carbon Unit?	A	Combined System Influent	NM	2.1																								
Secondary Carbon Unit?	B	Blower Effluent	NM	2.4																								
Polish Carbon Unit?	N/A	Lead Carbon Effluent	NM	0.0																								
VFD Setting (Hz)	60	Secondary Carbon Effluent	NM	0.0																								
		System Effluent	Effluent is secondary tank - Tank C offline																									
		Ambient Air		0.0																								
		Blower Filter Inlet	NM																									
		Blower Filter Outlet	NM																									
ABBREVIATIONS		COMMENTS																										
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**50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form**

GENERAL MONITORING INFORMATION																												
GEI Field Representative(s):		N. Troccoli		Monitoring Start Time:	11:00 AM																							
				Monitoring End Time:	11:15 AM																							
Date:		09/19/24																										
Weather:		Mid 60's, Cloudy																										
INSTRUMENTATION INFORMATION																												
	Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?																							
	PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	Y / N 100.0 ppm																							
	Manometer (in. H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading																							
	Anemometer (CFM)	Reed	R4500SD	N/A	N/A																							
FIELD MEASUREMENTS & OBSERVATIONS																												
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data																							
		Monitoring Point	Pressure (in. H₂O)	VOC (ppm)	Velocity (ft/min)	System Flowrate (CFM):																						
Fenced Enclosure Secure?	Yes	West Header	NM	NM	NM	NM																						
Blower On?	Yes	Center Header	NM	NM																								
Condensate Accumulated?	No	East Header	NM	NM	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr style="background-color: #ffffcc;"> <th align="center" colspan="2">Tank Exterior Monitoring</th> </tr> <tr style="background-color: #ffffcc;"> <th align="center" colspan="2">Bubbling Paint Visible?</th> </tr> <tr> <th>Tank</th> <th>Y/N</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Yes</td> </tr> <tr> <td>B</td> <td>Yes</td> </tr> <tr> <td>C</td> <td>Yes</td> </tr> <tr style="background-color: #ffffcc;"> <th align="center" colspan="2">Rust Visible?</th> </tr> <tr> <th>Tank</th> <th>Y/N</th> </tr> <tr> <td>A</td> <td>Yes</td> </tr> <tr> <td>B</td> <td>Yes</td> </tr> <tr> <td>C</td> <td>Yes</td> </tr> </tbody> </table>		Tank Exterior Monitoring		Bubbling Paint Visible?		Tank	Y/N	A	Yes	B	Yes	C	Yes	Rust Visible?		Tank	Y/N	A	Yes	B	Yes	C	Yes
Tank Exterior Monitoring																												
Bubbling Paint Visible?																												
Tank	Y/N																											
A	Yes																											
B	Yes																											
C	Yes																											
Rust Visible?																												
Tank	Y/N																											
A	Yes																											
B	Yes																											
C	Yes																											
Condensate Drained?	NA	North Header	NM	NM																								
Hour Meter Reading?	NM	South Header	NM	NM																								
Lead Carbon Unit?	A	Combined System Influent	NM	8.3																								
Secondary Carbon Unit?	B	Blower Effluent	NM	8.9																								
Polish Carbon Unit?	N/A	Lead Carbon Effluent	NM	0.0																								
VFD Setting (Hz)	60	Secondary Carbon Effluent	NM	0.0																								
		System Effluent	Effluent is secondary tank - Tank C offline																									
		Ambient Air		0.0																								
		Blower Filter Inlet	NM																									
		Blower Filter Outlet	NM																									
ABBREVIATIONS		COMMENTS																										
ppm = parts per million CFM = cubic feet per minute ft/min = feet per minute PID = photoionization detector N/A = Not Applicable VOC = volatile organic compound in. H ₂ O = inches of water column NM = Not Measured VFD = Variable Frequency Drive																												

50 Tufts Street Sub-Slab Depressurization System Monthly Monitoring Form

GENERAL MONITORING INFORMATION						
GEI Field Representative(s):		N. Troccoli		Monitoring Start Time: 9:45 AM		
				Monitoring End Time: 10:15 AM		
Date:		10/09/24				
Weather:		50's, Sunny				
INSTRUMENTATION INFORMATION						
	Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?	
	PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	Y / N 100.1 ppm	
	Manometer (in. H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading	
	Anemometer (CFM)	Reed	R4500SD	N/A	N/A	
FIELD MEASUREMENTS & OBSERVATIONS						
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data	
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Velocity (ft/min)	System Flowrate (CFM):
Fenced Enclosure Secure?	Yes	West Header	-2.62	3.5	4198	366
Blower On?	Yes	Center Header	-2.77	4.1		
Condensate Accumulated?	No	East Header	-2.79	1.6	Tank Exterior Monitoring	
Condensate Drained?	NA	North Header	-2.75	2.6	Bubbling Paint Visible?	
Hour Meter Reading?	NM	South Header	-2.88	21.5	Tank	Y/N
Lead Carbon Unit?	A	Combined System Influent	-6.37	3.2	A	Yes
Secondary Carbon Unit?	B	Blower Effluent	28.40	5.2	B	Yes
Polish Carbon Unit?	N/A	Lead Carbon Effluent	16.47	0.0	C	Yes
VFD Setting (Hz)	60	Secondary Carbon Effluent	1.19	0.0	Rust Visible?	
		System Effluent	Effluent is secondary tank - Tank C offline		Tank	Y/N
		Ambient Air		0.0	A	Yes
		Blower Filter Inlet	-17		B	Yes
		Blower Filter Outlet	NM		C	Yes
ABBREVIATIONS		COMMENTS				
ppm = parts per million CFM = cubic feet per minute ft/min = feet per minute PID = photoionization detector N/A = Not Applicable VOC = volatile organic compound in. H2O = inches of water column NM = Not Measured VFD = Variable Frequency Drive						

50 Tufts Street Sub-Slab Depressurization System Monthly Monitoring Form

GENERAL MONITORING INFORMATION						
GEI Field Representative(s):		N. Troccoli		Monitoring Start Time:		
				10:00 AM		
				Monitoring End Time:		
				10:15 AM		
Date:		11/07/24				
Weather:		60's, Sunny				
INSTRUMENTATION INFORMATION						
	Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?	
	PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	Y / N 100.5 ppm	
	Manometer (in. H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading	
	Anemometer (CFM)	Reed	R4500SD	N/A	N/A	
FIELD MEASUREMENTS & OBSERVATIONS						
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data	
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Velocity (ft/min)	System Flowrate (CFM):
Fenced Enclosure Secure?	Yes	West Header	NM	NM	NM	NM
Blower On?	Yes	Center Header	NM	NM		
Condensate Accumulated?	No	East Header	NM	NM	Tank Exterior Monitoring	
Condensate Drained?	NA	North Header	NM	NM	Bubbling Paint Visible?	
Hour Meter Reading?	NM	South Header	NM	NM	Tank	Y/N
Lead Carbon Unit?	A	Combined System Influent	NM	3.7	A	Yes
Secondary Carbon Unit?	B	Blower Effluent	NM	4.3	B	Yes
Polish Carbon Unit?	N/A	Lead Carbon Effluent	NM	0.0	C	Yes
VFD Setting (Hz)	60	Secondary Carbon Effluent	NM	0.0	Rust Visible?	
		System Effluent	Effluent is secondary tank - Tank C offline		Tank	Y/N
		Ambient Air		0.0	A	Yes
		Blower Filter Inlet	NM		B	Yes
		Blower Filter Outlet	NM		C	Yes
ABBREVIATIONS		COMMENTS				
ppm = parts per million CFM = cubic feet per minute ft/min = feet per minute PID = photoionization detector N/A = Not Applicable VOC = volatile organic compound in. H2O = inches of water column NM = Not Measured VFD = Variable Frequency Drive						

**50 Tufts Street Sub-Slab Depressurization System
Monthly Monitoring Form**

GENERAL MONITORING INFORMATION														
GEI Field Representative(s):		D. Miller		Monitoring Start Time: 3:10 PM										
				Monitoring End Time: 3:30 PM										
Date:		12/13/24												
Weather:		30's, Sunny												
INSTRUMENTATION INFORMATION														
	Instrument	Manufacturer	Model	Calibrated To:	Successful Calibration?									
	PID (ppm)	RAE Systems	MiniRAE 3000	100 ppm Isobutylene	Y / N 100.0 ppm									
	Manometer (in. H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	Zeroed before each reading									
	Anemometer (CFM)	Reed	R4500SD	N/A	N/A									
FIELD MEASUREMENTS & OBSERVATIONS														
System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data									
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Velocity (ft/min)	System Flowrate (CFM):								
Fenced Enclosure Secure?	Yes	West Header	NM	NM	NM	NM								
Blower On?	Yes	Center Header	NM	NM										
Condensate Accumulated?	No	East Header	NM	NM	Tank Exterior Monitoring Bubbling Paint Visible? <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Tank</th> <th>Y/N</th> </tr> </thead> <tbody> <tr><td>A</td><td>Yes</td></tr> <tr><td>B</td><td>Yes</td></tr> <tr><td>C</td><td>Yes</td></tr> </tbody> </table>		Tank	Y/N	A	Yes	B	Yes	C	Yes
Tank	Y/N													
A	Yes													
B	Yes													
C	Yes													
Condensate Drained?	NA	North Header	NM	NM										
Hour Meter Reading?	NM	South Header	NM	NM										
Lead Carbon Unit?	A	Combined System Influent	NM	2.0										
Secondary Carbon Unit?	B	Blower Effluent	NM	1.7										
Polish Carbon Unit?	N/A	Lead Carbon Effluent	NM	0.0	Rust Visible? <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Tank</th> <th>Y/N</th> </tr> </thead> <tbody> <tr><td>A</td><td>Yes</td></tr> <tr><td>B</td><td>Yes</td></tr> <tr><td>C</td><td>Yes</td></tr> </tbody> </table>		Tank	Y/N	A	Yes	B	Yes	C	Yes
Tank	Y/N													
A	Yes													
B	Yes													
C	Yes													
VFD Setting (Hz)	60	Secondary Carbon Effluent	NM	0.0										
		System Effluent	Effluent is secondary tank - Tank C offline											
		Ambient Air		0.0										
		Blower Filter Inlet	NM											
		Blower Filter Outlet	NM											
ABBREVIATIONS		COMMENTS												
ppm = parts per million CFM = cubic feet per minute ft/min = feet per minute PID = photoionization detector N/A = Not Applicable VOC = volatile organic compound in. H ₂ O = inches of water column NM = Not Measured VFD = Variable Frequency Drive														

**60 Tufts Street
SSDS Field Monitoring Form**

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	N. Troccoli	Monitoring Start Time:	12:15 PM
		Monitoring End Time:	12:45 PM
Date:	07/11/24		
Weather:	60's °F, Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE 3000	592-911053	100.0 ppm Isobutylene	Y / N Cal. Reading (ppm): 100.6
Manometer (in. H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	N/A	Zeroed before each reading? Y / N
Anemometer (CFM)	Reed	R4500SD	N/A	N/A	N/A

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data	
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Velocity (feet per minute)	System Flowrate (CFM): = (PI * r ²) * ft per min
Blower Enclosure Secure?	Y / N	North Header	NM*	NM*	1681	144
Blower On?	Y / N	South Header	NM*	NM*		
Influent Condensate Accumulated?	Y / N	Combined System Influent	-1.41	0.0		
Effluent Condensate Accumulated?	Y / N	System Effluent	N/A	0.0		
Condensate Drained?	Y / N	Blower Filter Inlet	11			
Hour Meter Reading	N/A	Blower Filter Outlet	32			
VFD Setting (Hz)	60	Ambient Air Outside Blower Enclosure		0.0		

NOTES:

1. ppm = parts per million.
2. CFM = cubic feet per minute.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H₂O = inches of water column.
7. VFD = variable frequency drive.
8. Hz = Hertz.

COMMENTS:

* Note: Headers not measured because we did not have access to the building.

**60 Tufts Street
SSDS Field Monitoring Form**

GENERAL MONITORING INFORMATION

GEI Field Representative(s):	N. Troccoli	Monitoring Start Time:	10:15 AM
		Monitoring End Time:	10:45 AM
Date:	10/09/24		
Weather:	50's °F, Sunny		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE 3000	592-909711	100.0 ppm Isobutylene	Y / N Cal. Reading (ppm): 100.1
Manometer (in. H ₂ O)	Dwyer	Mark III-475-0 Series	N/A	N/A	Zeroed before each reading? Y / N
Anemometer (CFM)	Reed	R4500SD	N/A	N/A	N/A

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration		Pressure/VOC Measurements			System Flow Rate Data	
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Velocity (feet per minute)	System Flowrate (CFM): = (PI * r ²) * ft per min
Blower Enclosure Secure?	Y / N	North Header	NM*	NM*	1350	115
Blower On?	Y / N	South Header	NM*	NM*		
Influent Condensate Accumulated?	Y / N	Combined System Influent	-1.58	0.1		
Effluent Condensate Accumulated?	Y / N	System Effluent	N/A	0.0		
Condensate Drained?	Y / N	Blower Filter Inlet	11			
Hour Meter Reading	N/A	Blower Filter Outlet	33			
VFD Setting (Hz)	60	Ambient Air Outside Blower Enclosure		0.0		

NOTES:

1. ppm = parts per million.
2. CFM = cubic feet per minute.
3. PID = photoionization detector.
4. N/A = Not Applicable.
5. VOC = volatile organic compound.
6. in. H₂O = inches of water column.
7. VFD = variable frequency drive.
8. Hz = Hertz.

COMMENTS:

* Note: Headers not measured because we did not have access to the building.

**Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log**

GENERAL INFORMATION					
GEI Field Representatives: <u>N. Troccoli</u>		Outdoor Monitoring		Indoor Monitoring	
Date: <u>07/11/24</u>		Start-time of monitoring work: <u>12:45 PM</u>		NA	
Weather: <u>90's °F, Sunny</u>		End-time of monitoring work: <u>1:30 PM</u>		NA	
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	GEI Identification No.	Calibrant	Successful Calibration
PID (ppm)	RAE Systems	miniRAE3000	SN 592-911053	100 ppm Isobutylene	Yes
Manometer (in. H ₂ O)	Dwyer	Mark III-475-0000-FM	N/A	N/A	Zeroed before each reading
Hot Wire Thermo-Anemometer (ft/min)	Reed	R4500SD	N/A	N/A	Zeroed before each reading
OBSERVATIONS AND MEASUREMENTS					
ENCLOSURE MEASUREMENTS					
Shed Secure? <u>NA</u>		Influent Flow Rate			
Condensate Accumulated? <u>Yes</u>		Port ID		Flow (cfm)	
Condensate Drained? <u>No</u>		Manifold 12		126	
		Manifold 13		86	
		Manifold 14		109	
System Monitoring Points					
Port ID	Typical Vacuum Range (in. H ₂ O)	Vacuum (in. H ₂ O)	Typical Range of VOCs (ppb)	VOC Concentration (ppm)	
Manifold 12	-0.300 to -0.500	-0.879	0 to 2000	0.0	
Manifold 13	-0.300 to -0.500	-1.398	0 to 2000	0.1	
Manifold 14	-0.300 to -0.500	-0.827	0 to 2000	0.0	
EXTERIOR EXTRACTION MONITORING POINT MEASUREMENTS					
Monitoring Point Identification	Status (on/off)	Vacuum (in. H ₂ O)	VOC Concentration (ppm)		
122-1	on	-0.661	0.0		
122-2	on	-0.685	0.1		
122-3	on	-0.682	0.0		
126-1	on	-0.661	0.0		
126-2	on	-0.506	0.0		
126-3	on	-0.562	0.1		
134-1	on	-1.154	0.2		
134-2	on	-1.256	0.0		
134-3	on	-1.159	0.1		
138-1	on	-1.246	0.0		
138-2	on	-1.232	0.0		
138-3	on	-1.271	0.0		
142-1	on	-0.625	0.1		
142-2	on	-0.605	0.0		
142-3	on	-0.595	0.1		
146-1	on	-0.588	0.0		
146-2	on	-0.573	0.0		
146-3	on	-0.601	0.0		

**Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log**

INTERIOR MEASUREMENTS																																									
Ambient Air Measurements		Sub-Slab Monitoring Points																																							
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Classroom	VOC Concentration (ppm)																																								
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Room 142A	NM	NM																																							
Room 146A	NM	NM																																							
COMMENTS																																									
*Vacuum and flow readings were inconsistent due to condensate accumulation; average of measurements is shown - Manifold 12 Vacuum readings ranged from -1.673 to -3.404 (in. H₂O) and Flow readings ranged from 34 to 47 (cfm) - 134-1 Vacuum reading ranged from -0.130 to -1.496 (in. H₂O) - 134-2 Vacuum reading ranged from -0.143 to -1.507 (in. H₂O) - 134-3 Vacuum reading ranged from -0.192 to -1.090 (in. H₂O) - 138-1 Vacuum reading ranged from -0.336 to -2.221 (in. H₂O) - 138-2 Vacuum reading ranged from -0.198 to -2.229 (in. H₂O) - 138-3 Vacuum reading ranged from -0.194 to -2.073 (in. H₂O)																																									
Notes: 1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146. 2. PID = photoionization detector. 3. ppb = parts per billion. 4. ppm = parts per million. 5. in. H₂O = inches of water column. 6. ft = feet. 7. cfm = cubic feet per minute. 8. NA = Not Applicable. 9. NM = Not Measured. 10. Anemometer not functioning. Influent flow was not measured.																																									

**Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log**

GENERAL INFORMATION					
GEI Field Representatives: <u>N. Troccoli</u>		Outdoor Monitoring		Indoor Monitoring	
Date: <u>10/09/24</u>		Start-time of monitoring work: <u>10:45 AM</u>		NA	
Weather: <u>50's °F, Sunny</u>		End-time of monitoring work: <u>11:50 AM</u>		NA	
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	GEI Identification No.	Calibrant	Successful Calibration
PID (ppm)	RAE Systems	miniRAE3000	SN 592-909711	100 ppm Isobutylene	Yes
Manometer (in. H ₂ O)	Dwyer	Mark III-475-0000-FM	N/A	N/A	Zeroed before each reading
Hot Wire Thermo-Anemometer (ft/min)	Reed	R4500SD	N/A	N/A	Zeroed before each reading
OBSERVATIONS AND MEASUREMENTS					
ENCLOSURE MEASUREMENTS					
Shed Secure? <u>NA</u>		Influent Flow Rate			
Condensate Accumulated? <u>Yes</u>		Port ID		Flow (cfm)	
Condensate Drained? <u>No</u>		Manifold 12		103	
		Manifold 13		74	
		Manifold 14		86	
System Monitoring Points					
Port ID	Typical Vacuum Range (in. H ₂ O)	Vacuum (in. H ₂ O)	Typical Range of VOCs (ppb)	VOC Concentration (ppm)	
Manifold 12	-0.300 to -0.500	-0.870	0 to 2000	0.0	
Manifold 13	-0.300 to -0.500	-1.465	0 to 2000	0.0	
Manifold 14	-0.300 to -0.500	-0.810	0 to 2000	0.0	
EXTERIOR EXTRACTION MONITORING POINT MEASUREMENTS					
Monitoring Point Identification	Status (on/off)	Vacuum (in. H ₂ O)	VOC Concentration (ppm)		
122-1	on	-0.665	0.0		
122-2	on	-0.694	0.1		
122-3	on	-0.679	0.0		
126-1	on	-0.672	0.0		
126-2	on	-0.482	0.0		
126-3	on	-0.540	0.0		
134-1	on	-1.238	0.1		
134-2	on	-1.337	0.1		
134-3	on	-1.247	0.0		
138-1	on	-1.362	0.1		
138-2	on	-1.358	0.0		
138-3	on	-1.358	0.0		
142-1	on	-0.579	0.0		
142-2	on	-0.592	0.0		
142-3	on	-0.604	0.0		
146-1	on	-0.555	0.0		
146-2	on	-0.557	0.0		
146-3	on	-0.562	0.1		

**Capuano Center Sub-Slab Depressurization System
Monthly Mechanical Inspection Log**

INTERIOR MEASUREMENTS		
Ambient Air Measurements		Sub-Slab Monitoring Points
Classroom	VOC Concentration (ppm)	
122	NM	
126	NM	
134	NM	
138	NM	
133	NM	
137	NM	
142	NM	
146	NM	
COMMENTS		
*Vacuum and flow readings were inconsistent due to condensate accumulation; average of measurements is shown - Manifold 12 Vacuum readings ranged from -1.673 to -3.404 (in. H₂O) and Flow readings ranged from 34 to 47 (cfm) - 134-1 Vacuum reading ranged from -0.130 to -1.496 (in. H₂O) - 134-2 Vacuum reading ranged from -0.143 to -1.507 (in. H₂O) - 134-3 Vacuum reading ranged from -0.192 to -1.090 (in. H₂O) - 138-1 Vacuum reading ranged from -0.336 to -2.221 (in. H₂O) - 138-2 Vacuum reading ranged from -0.198 to -2.229 (in. H₂O) - 138-3 Vacuum reading ranged from -0.194 to -2.073 (in. H₂O)		
Notes: 1. Manifold 12 is the manifold pipe for rooms 122 and 126. Manifold 13 is the manifold pipe for rooms 134 and 138. Manifold 14 is the manifold pipe for rooms 142 and 146. 2. PID = photoionization detector. 3. ppb = parts per billion. 4. ppm = parts per million. 5. in. H₂O = inches of water column. 6. ft = feet. 7. cfm = cubic feet per minute. 8. NA = Not Applicable. 9. NM = Not Measured. 10. Anemometer not functioning. Influent flow was not measured.		

Appendix J EPMM Inspection Forms

**EPMM Option 1
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION					
GEI Field Representative(s):		D. Miller		Address: 95 Franklin St	
				Monitoring Start Time: 3:00 PM	
Date:		6/21/2024		Monitoring End Time: 3:30 PM	
Weather:		Sunny, 85°F			
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909687	100 ppm Isobutylene Time:	☒ N Cal. Reading (ppm):100.4
Manometer (in. H ₂ O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? ☒ N
FIELD MEASUREMENTS / OBSERVATIONS					
System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	☒ Y / N	System Influent Pipe	0.3	1.1	-0.253 in. H ₂ O Dwyer
Exterior Fan Condition (housing, wires, etc)?	☒ good / fair / poor	Ambient Air	N/A	0.0	
Excessive fan noise?	Y / ☒ N				
Interior Extraction Pipe Condition (cracks, damage, etc)?	☒ good / fair / poor				
Exterior Pipe Condition (cracks, damage, etc.)?	☒ good / fair / poor				
Leaks Around Slab Penetrations?	Y / ☒ N				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / ☒ N				
NOTES:					
1. EPMM = Exposure Pathway Mitigation Measure. 2. ppm = parts per million. 3. PID = photoionization detector. 4. N/A = Not Applicable. 5. VOC = volatile organic compound. 6. in. H ₂ O = inches of water column. 7. NM = Not Measured.					
COMMENTS:					
1. Observed minor epoxy peeling area on floor near current furnace, ~2 square feet; appears to be where an old furnace was					
2. Observed minor epoxy peeling on floor to right of stairs, adjacent to the new wood framing					
3. Replaced node battery					
4. Downdraft prevention cap missing					

**EPMM Options 2 and 3
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	N. Troccoli	Property Address:	91-93 Franklin Street
	J. Graff	Monitoring Start Time:	8:30 AM
Date:	11/4/2024	Monitoring End Time:	8:45 AM
Weather:	Cloudy, 45° F	Option 2 or 3:	2 / <u>3</u>

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909771	100 ppm Isobutylene	<u>Y</u> / N Cal. Reading (ppm): 100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	good <u>fair</u> poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / <u>N</u>
Downdraft Prevention Cap Present?	<u>Y</u> / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Brick dust observed on walls and pipes.
2. Some water damage around furnace and spread towards central basement
3. Minor peeling of epoxy layer on some areas of wall by bulkhead door/windows, and by bottom of stairs. 0.0 ppm
4. Ambient Air = 0.0 - 0.1 ppm

**EPMM Option 1
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION					
GEI Field Representative(s):		N. Troccoli		Address: 95 Franklin St	
		J. Graff		Monitoring Start Time: 8:15 AM	
Date:		11/4/2024		Monitoring End Time: 8:30 AM	
Weather:		Cloudy, 45°F			
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene Time:	☒ N Cal. Reading (ppm):100.0
Manometer (in. H ₂ O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? ☒ N
FIELD MEASUREMENTS / OBSERVATIONS					
System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	☒ Y / N	System Influent Pipe	0.3	NM	-0.3 in. H ₂ O Dwyer
Exterior Fan Condition (housing, wires, etc)?	☒ good / fair / poor	Ambient Air	N/A	0.0	
Excessive fan noise?	Y / ☒ N				
Interior Extraction Pipe Condition (cracks, damage, etc)?	☒ good / fair / poor				
Exterior Pipe Condition (cracks, damage, etc.)?	☒ good / fair / poor				
Leaks Around Slab Penetrations?	Y / ☒ N				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / ☒ N				
NOTES:					
1. EPMM = Exposure Pathway Mitigation Measure. 2. ppm = parts per million. 3. PID = photoionization detector. 4. N/A = Not Applicable. 5. VOC = volatile organic compound. 6. in. H ₂ O = inches of water column. 7. NM = Not Measured.					
COMMENTS:					
1. Observed minor epoxy peeling area on floor near current furnace, ~2 square feet; appears to be where an old furnace was					
2. Observed minor epoxy peeling on floor to right of stairs, adjacent to the new wood framing					
3. Replaced node battery					
4. Downdraft prevention cap missing					
5. Telemetry not being received; may need to replace pressure switch					

**EPMM Options 2 and 3
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	N. Troccoli	Property Address:	166-168 Glen Street
Date:	11/6/2024	Monitoring Start Time:	10:00 AM
Weather:	Sunny, ~70°F	Monitoring End Time:	10:15 AM
		Option 2 or 3:	2 / 3

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene	Y / N Cal. Reading (ppm): 100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	good / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	good / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	good / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / N
Downdraft Prevention Cap Present?	Y / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Water staining on epoxy on chimney and floor, near furnace.
2. Some cracking in previously repaired areas on floor.
3. Cracks by unit 1 heating furnace, by water heater/laundry/support pole, in unit 1 storage, and at base of stairs to driveway
4. Took photos of cracks and told Martin Kwok (owner unit 1) that epoxy would be re-applied at a later date.
5. Ambient Air = 0.0 - 0.1 ppm.

**EPEM Option 1
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION					
GEI Field Representative(s):		D. Miller		Address: 9 Knowlton Street	
				Monitoring Start Time: 4:00 PM	
Date:		11/11/2024		Monitoring End Time: 4:30 PM	
Weather:		Partly Cloudy, ~60°F			
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene	☒ N Cal. Reading (ppm): 100.0
Manometer (in. H ₂ O)	Dwyer	Mark 111-475-0 Series		N/A	Zeroed before each reading? ☒ N
FIELD MEASUREMENTS / OBSERVATIONS					
System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	☒ Y / N	System Influent Pipe	-0.8	0.0	-0.75 Dwyer
Exterior Fan Condition (housing, wires, etc)?	☒ good / fair / poor	SS1	0.000	0.0	Near water heater in the center of the basement.
Excessive fan noise?	Y / ☒ N	SS2	0.000	0.0	by electric panels in front corner of basement
Interior Extraction Pipe Condition (cracks, damage, etc)?	☒ good / fair / poor				
Exterior Pipe Condition (cracks, damage, etc)?	☒ good / fair / poor				
Leaks Around Slab Penetrations?	Y / ☒ N				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / ☒ N				
NOTES:					
1. ppm = parts per million. 2. PID = photoionization detector. 3. N/A = Not Applicable. 4. VOC = volatile organic compound. 5. in. H ₂ O = inches of water column. 6. NM = Not Measured.					
COMMENTS:					
1. Ambient Air reading = 0.0 ppm.					
2. Approximately 1/2 of the basement is used for storage, so it wasn't possible to observe all the slab penetrations.					
3. Downdraft prevention cap missing					
4. Some cracking in slab and observed exposed soil by sewer pump.					

**EPMM Option 1
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION					
GEI Field Representative(s):		N. Troccoli		Address: 13 Knowlton Street	
				Monitoring Start Time: 2:00 PM	
Date:		11/13/2024		Monitoring End Time: 2:25 PM	
Weather:		Sunny, ~45° F			
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-911053	100 ppm Isobutylene Time:	☒ Y / N Cal. Reading (ppm): 100.1
Manometer (in. H ₂ O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? ☒ Y / N
FIELD MEASUREMENTS / OBSERVATIONS					
System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	☒ Y / ☐ N	SSVS Influent Pipe	-0.662	0.1	-0.63 Dwyer
Exterior Fan Condition (housing, wires, etc)?	☒ good / fair / poor	SS1	-0.056	0.0	by water heater
Excessive fan noise?	Y / ☒ N	SS2	-0.052	0.0	by laundry room door
Interior Extraction Pipe Condition (cracks, damage, etc)?	☒ good / fair / poor	Ambient Air	NA	0.0	
Exterior Pipe Condition (cracks, damage, etc)?	☒ good / fair / poor				
Leaks Around Slab Penetrations?	Y / ☒ N				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / ☒ N				
NOTES:					
1. EPMM = Exposure Pathway Mitigation Measure. 2. ppm = parts per million. 3. PID = photoionization detector. 4. N/A = Not Applicable. 5. VOC = volatile organic compound. 6. in. H ₂ O = inches of water column. 7. NM = Not Measured.					
COMMENTS:					
1. Finished basement, partially demo'd.					
3. Workers present during observations					
3. Replaced node battery					

**EPMM Options 2 and 3
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	N. Troccolo	Property Address:	17 Knowlton Street
		Monitoring Start Time:	2:30 PM
Date:	11/13/2024	Monitoring End Time:	2:45 PM
Weather:	Sunny, ~45° F	Option 2 or 3:	2 / <u>3</u>

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene	<u>Y</u> / N Cal. Reading (ppm): 100.1

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	<u>good</u> / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / <u>N</u>
Downdraft Prevention Cap Present?	<u>Y</u> / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Ambient Air = 0.0 ppm
2. Few minor cracks observed in slab

**EPMM Option 1
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION					
GEI Field Representative(s):		N. Troccoli		Address: 31-33 Knowlton Street	
		J. Graff		Monitoring Start Time: 11:00 AM	
Date:		11/6/2024		Monitoring End Time: 11:15 AM	
Weather:		Sunny, ~70°F			
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909771	100 ppm Isobutylene	☒ N Cal. Reading (ppm): 100.0
Manometer (in. H ₂ O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? ☒ N
FIELD MEASUREMENTS / OBSERVATIONS					
System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	☒ Y ☐ N	System Influent Pipe (Dwyer Manometer)	NM	NM	
Exterior Fan Condition (housing, wires, etc)?	☒ good ☐ fair ☐ poor	SS1	NM	NM	
Excessive fan noise?	☐ Y ☒ N	SS2	NM	NM	
Interior Extraction Pipe Condition (cracks, damage, etc)?	☒ good ☐ fair ☐ poor	Ambient Air	N/A	0.0	
Exterior Pipe Condition (cracks, damage, etc)?	☒ good ☐ fair ☐ poor				
Leaks Around Slab Penetrations?	☐ Y ☒ N				
Slab or Wall Cracks / Openings That Impair System Performance?	☐ Y ☒ N				Degraded concrete in storage room, likely due to water infiltration
NOTES:					
1. EPMM = Exposure Pathway Mitigation Measure. 2. ppm = parts per million. 3. PID = photoionization detector. 4. N/A = Not Applicable. 5. VOC = volatile organic compound. 6. in. H ₂ O = inches of water column. 7. NM = Not Measured.					
COMMENTS:					
1. System influent pipe unable to be measured during observations. U-bend manometer needs to be replaced.					
2. Many shallow cracks throughout slab and wall, especially in slab area near first floor stairs and bulkhead. Worn concrete in storage area, screened with PID = 0.0 ppm.					
3. Sub-slab point near stairs filled with debris so did not measure. Sub-slab point by furnace inaccessible so did not measure.					
4. Observed sump in room with laundry, adjacent to driveway side. PID = 0.0 ppm.					
5. Replaced node battery.					

**EPMM Options 2 and 3
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	N. Troccolo	Property Address:	32 Knowlton Street
	J. Graff	Monitoring Start Time:	12:00 PM
Date:	11/6/2024	Monitoring End Time:	12:15 PM
Weather:	Sunny, ~70°F	Option 2 or 3:	2 / <u>3</u>

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene	<u>Y</u> / N Cal. Reading (ppm): 100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	<u>good</u> / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / <u>N</u>
Downdraft Prevention Cap Present?	<u>Y</u> / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Basement is partially finished with some SSDS pipes hidden behind walls. No piping is visible.
2. Exterior piping appeared in good condition. PID Reading: 0.0 ppm
3. Ambient Air = 0.0 ppm
4. One noticeable crack on the basement floor

**EPMM Option 4
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	N. Troccoli	Property Address:	34 Knowlton St
	J. Graff	Monitoring Start Time:	9:00 AM
Date:	11/4/2024	Monitoring End Time:	9:15 AM
Weather:	Cloudy, ~45°F		

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene	☒ Y / N Cal. Reading (ppm): 100.1

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	good / fair / poor	Not observed.
Interior Pipe Condition (cracks, damage, etc.)?	☒ good / fair / poor	
Slab or Wall Cracks / Openings That Impair System Performance?	Y / ☒ N	
Downdraft Prevention Cap Present?	Y / ☒ N	Not observed.

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 4 = Consists of a venting system installed in gravel with riser pipes through the roof, a sub slab vapor barrier, and new concrete floor.
3. ppm = parts per million.
4. PID = photoionization detector.
5. VOC = volatile organic compound.

COMMENTS

1. Small slab crack near storage unit #2 and extending from support pole.
2. Some pipes not visible due to storage.
3. Ambient Air = 0.1 ppm

**EPMM Option 1
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION					
GEI Field Representative(s):		D. Miller		Address: 35-37 Knowlton Street	
				Monitoring Start Time: 9:35 AM	
Date:		11/8/2024		Monitoring End Time: 10:00 AM	
Weather:		Sunny, ~55°F			
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909771	100 ppm Isobutylene	☒ N Cal. Reading (ppm): 100.0
Manometer (in. H ₂ O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? ☒ N
FIELD MEASUREMENTS / OBSERVATIONS					
System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	☒ Y ☐ N	Ambient Air	N/A	0.1	
Exterior Fan Condition (housing, wires, etc)?	☒ good fair / poor				
Excessive fan noise?	Y ☒ N				
Interior Extraction Pipe Condition (cracks, damage, etc)?	☒ good fair / poor				
Exterior Pipe Condition (cracks, damage, etc)?	☒ good fair / poor				
Leaks Around Slab Penetrations?	Y ☒ N				
Slab or Wall Cracks / Openings That Impair System Performance?	Y ☒ N				
NOTES:					
1. EPMM = Exposure Pathway Mitigation Measure. 2. ppm = parts per million. 3. PID = photoionization detector. 4. N/A = Not Applicable. 5. VOC = volatile organic compound. 6. in. H ₂ O = inches of water column. 7. NM = Not Measured.					
COMMENTS:					
1. There is no permanent manometer on the influent pipe at this residence. The previously installed sub-slab points were destroyed during the EPMM installation.					
2. Ambient Air = 0.1 ppm.					
3. Ongoing renovation work; exterior work complete, indoor finishes ongoing including in basement					
4. Telemetry node was removed during exterior renovation and needs to be replaced					

**EPMM Option 4
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	N. Troccoli	Property Address:	10 Morton Street
Date:	11/7/2024	Monitoring Start Time:	9:45 AM
Weather:	Sunny, ~60°F	Monitoring End Time:	10:00 AM

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene	☒ Y / N Cal. Reading (ppm):100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	☒ good / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	☒ good / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / ☒ N
Downdraft Prevention Cap Present?	☒ Y / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 4 = Consists of a venting system installed in gravel with riser pipes through the roof, a sub slab vapor barrier, and new concrete floor.
3. ppm = parts per million.
4. PID = photoionization detector.
5. VOC = volatile organic compound.

COMMENTS

1. Ambient Air = 0.1 ppm
2. Observed shallow cracks near stairs and along wall following vapor barrier replacement.
3. Observed shallow cracks along wall/ floor interface.
4. Piping in good condition.
5. Two new sub-slab soil vapor monitoring points installed in April 2024 (SV5 and SV6)

**EPMM Options 2 and 3
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	D. Miller	Property Address:	11 Morton Street
Date:	11/8/2024	Monitoring Start Time:	10:05 AM
Weather:	Sunny, ~55°F	Monitoring End Time:	10:25 AM
		Option 2 or 3:	<u>2</u> / 3

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909711	100 ppm Isobutylene	<u>Y</u> / N Cal. Reading (ppm): 100.1

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	<u>good</u> / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / <u>N</u>
Downdraft Prevention Cap Present?	<u>Y</u> / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Ambient Air = 0.0 ppm
2. On walls, in storage 1 & 2, minor staining and flaking of epoxy.
3. On floor, by door to finished side of basement, minor cracking of expoy.
4. Owner noted a drainage system was installed in the basement to alevae basement flooding, along with a sump by the system influent pipe.
- Appears to just have concrete and no epoxy covering the drainage piping (french drain).
5. Two Riser Pipes present - one has downdraft prevention cap and one does not

**EPMM Options 2 and 3
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	N. Troccoli	Property Address:	12 Morton Street
	J. Graff	Monitoring Start Time:	11:30 AM
Date:	11/6/2024	Monitoring End Time:	11:45 AM
Weather:	Sunny, ~70°F	Option 2 or 3:	2 / <u>3</u>

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909771	100 ppm Isobutylene	<u>Y</u> / N Cal. Reading (ppm): 100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	<u>good</u> / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / <u>N</u>
Downdraft Prevention Cap Present?	<u>Y</u> / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Ambient Air = 0.0 ppm

**EPMM Option 1
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION					
GEI Field Representative(s):		N. Troccoli		Address: 13 Morton Street	
Date:		11/13/2024		Monitoring Start Time: 1:45 PM	
Weather:		Sunny, ~45° F		Monitoring End Time: 2:00 PM	
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-911053	100 ppm Isobutylene Time: 09:00 AM	☒ Y / ☐ N Cal. Reading (ppm): 100.0
Manometer (in. H ₂ O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? ☒ Y / ☐ N
FIELD MEASUREMENTS / OBSERVATIONS					
System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	Y ☒ / ☐ N	System Influent Pipe	-3.2	0.0	
Exterior Fan Condition (housing, wires, etc)?	☒ good / fair / poor	System Influent Pipe (Dwyer Manometer)	-3.116	0.0	
Excessive fan noise?	Y ☒ / ☐ N	SS1	0.000	0.0	Near building column between furnace and back wall; see comment (4.)
Interior Extraction Pipe Condition (cracks, damage, etc)?	☒ good / fair / poor	Ambient Air	N/A	0.0	
Exterior Pipe Condition (cracks, damage, etc)?	☒ good / fair / poor				
Leaks Around Slab Penetrations?	Y ☒ / ☐ N				
Slab or Wall Cracks / Openings That Impair System Performance?	Y ☒ / ☐ N				
NOTES:					
1. EPMM = Exposure Pathway Mitigation Measure. 2. ppm = parts per million. 3. PID = photoionization detector. 4. N/A = Not Applicable. 5. VOC = volatile organic compound. 6. in. H ₂ O = inches of water column. 7. NM = Not Measured.					
COMMENTS:					
1. Noted exposed cut in slab for water main in back of basement (unclear what covers water main, material crumbles), 0.0 ppm					
2. Replaced node battery					
3. Downdraft prevention cap missing					
4. SS1 point still filled with dust may have impaired readings; needs to be cleaned out.					
5. Observed an area of peeling paint on wall by bulkhead door; concrete here is also worn and in poor condition.					

**EPMM Option 1
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION					
GEI Field Representative(s):		N. Troccoli		Address: 18 Morton Street	
		J. Graff		Monitoring Start Time: 11:45 AM	
Date:		11/6/2024		Monitoring End Time: 12:00 PM	
Weather:		Sunny, ~70° F			
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909711	100 ppm Isobutylene Time:	☒ N Cal. Reading (ppm): 100.0
Manometer (in. H ₂ O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? ☒ N
FIELD MEASUREMENTS / OBSERVATIONS					
System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	☒ N	System Influent Pipe	-1.2	0.0	
Exterior Fan Condition (housing, wires, etc)?	☒ good fair / poor	System Influent Pipe (Dwyer Manometer)	-1.29	0.0	
Excessive fan noise?	Y ☒ N	SS1	NM	NM	not found
Interior Extraction Pipe Condition (cracks, damage, etc)?	☒ good fair / poor	SS2	NM	NM	not found
Exterior Pipe Condition (cracks, damage, etc.)?	☒ good fair / poor	ambient air	N/A	0.0 - 0.5	
Leaks Around Slab Penetrations?	Y ☒ N				
Slab or Wall Cracks / Openings That Impair System Performance?	Y ☒ N				
NOTES:					
1. EPMM = Exposure Pathway Mitigation Measure. 2. ppm = parts per million. 3. PID = photoionization detector. 4. N/A = Not Applicable. 5. VOC = volatile organic compound. 6. in. H ₂ O = inches of water column. 7. NM = Not Measured.					
COMMENTS:					
1. No downdraft prevention cap present.					
2. Replaced node battery					

**EPMM Options 2 and 3
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s):	D. Miller	Property Address:	19-19A Morton Street
Date:	11/08/24	Monitoring Start Time:	7:15 AM
Weather:	Sunny, ~45°F	Monitoring End Time:	7:30 AM
		Option 2 or 3:	2 / <u>3</u>

INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene	<u>Y</u> / N Cal. Reading (ppm): 100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	<u>good</u> / fair / poor
Epoxy Condition (cracks, peeling, water damage, etc.)?	good <u>fair</u> poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / <u>N</u>
Downdraft Prevention Cap Present?	<u>Y</u> / N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 2 = Consists of a venting system installed in a shallow trench around the interior basement floor perimeter, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
4. Option 3 = Consists of a venting system installed beneath the basement floor, a new concrete floor slab, cement stucco applied to the walls, and an epoxy vapor barrier applied to the walls and floor.
5. ppm = parts per million.
6. PID = photoionization detector.
7. VOC = volatile organic compound.

COMMENTS

1. Observed peeling epoxy in few locations on floor and wall, especially near stairs. Minor peeling at wall/floor interface.
2. Exposed concrete where water heater was replaced observed in 2018. Did not observe in 2024.
3. In 2018, minor water damage was observed near stairs, and at wall adjacent to Morton Street. No water damage observed in 2024.
4. Ambient Air = 0.0 ppm.

**EPMM Option 1
Field Monitoring / Inspection Form**

GENERAL MONITORING INFORMATION					
GEI Field Representative(s):		D. Miller		Address: 23 Tufts Street	
				Monitoring Start Time: 7:40 AM	
Date:		11/8/2024		Monitoring End Time: 8:10 AM	
Weather:		Sunny, ~45°F			
INSTRUMENTATION INFORMATION					
Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	miniRAE3000	592-909711	100 ppm Isobutylene Time:	☒ N Cal. Reading (ppm): 100.0 ppm
Manometer (in. H ₂ O)	Dwyer	Mark 111-475-0 Series	475-000-FM	N/A	Zeroed before each reading? ☒ N
FIELD MEASUREMENTS / OBSERVATIONS					
System Status/Configuration		Pressure/VOC Measurements			
		Monitoring Point	Pressure (in. H ₂ O)	VOC (ppm)	Location Description (e.g., distance from foundation walls)
Radon Fan On?	Y / ☒ N	System Influent Pipe	-3.3	0.0	
Exterior Fan Condition (housing, wires, etc)?	☒ good / fair / poor	System Influent Pipe (Dwyer Manometer)	-3.120	0.0	
Excessive fan noise?	Y / ☒ N				
Interior Extraction Pipe Condition (cracks, damage, etc)?	☒ good / fair / poor				
Exterior Pipe Condition (cracks, damage, etc.)?	☒ good / fair / poor				
Leaks Around Slab Penetrations?	Y / ☒ N				
Slab or Wall Cracks / Openings That Impair System Performance?	Y / ☒ N				
NOTES:					
1. EPMM = Exposure Pathway Mitigation Measure. 2. ppm = parts per million. 3. PID = photoionization detector. 4. N/A = Not Applicable. 5. VOC = volatile organic compound. 6. in. H ₂ O = inches of water column. 7. NM = Not Measured.					
COMMENTS:					
100% of basement floor/walls covered with dry wall and tiles, finished bedrooms.					
Ambient Air= 0.0 ppm					
Fan was off at arrival; changed node battery, switched fan on at 07:49					

EPMM Option 4
Field Monitoring / Inspection Form

GENERAL MONITORING INFORMATION FOR PASSIVE EPMM SYSTEMS

GEI Field Representative(s): <u>D. Miller</u> Date: <u>11/8/2024</u> Weather: <u>Sunny, ~55°F</u>	Property Address: <u>31 Tufts St</u> Monitoring Start Time: <u>8:50 AM</u> Monitoring End Time: <u>9:20 AM</u>
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INSTRUMENTATION INFORMATION

Instrument	Manufacturer	Model	Serial No.	Calibrated To:	Successful Calibration?
PID (ppm)	RAE Systems	ppmRAE3000	592-909771	100 ppm Isobutylene	☒ Y / N Cal. Reading (ppm): 100.0

FIELD MEASUREMENTS / OBSERVATIONS

System Status/Configuration

Exterior Pipe Condition (cracks, damage, etc.)?	☒ good / fair / poor
Interior Pipe Condition (cracks, damage, etc.)?	☒ good / fair / poor
Slab or Wall Cracks / Openings That Impair System Performance?	Y / ☒ N
Downdraft Prevention Cap Present?	Y / ☒ N

NOTES

1. EPMM = Exposure Pathway Mitigation Measure.
2. Option 4 = Consists of a venting system installed in gravel with riser pipes through the roof, a sub slab vapor barrier, and new concrete floor.
3. ppm = parts per million.
4. PID = photoionization detector.
5. VOC = volatile organic compound.

COMMENTS

1. Accessed roof to observe system exterior/riser pipe
2. interior pipes are in units and could not gain access during observation
3. Ambient Air = 0.0 ppm
4. SV1 (exit stairwell 2): VOCs = 0.1 ppm, Vac = 0.000 in. H2O
5. SV2 (maintenance/utility room): VOCs = 3.3 ppm, Vac = 0.000 in. H2O